



Case No. 2020-00717-FOIA-OS
American Oversight v. HHS, Civil No. 20-1169

August 9, 2021

Austin Evers
Executive Director
American Oversight
Sent via email: foia@americanoversight.org

Dear Mr. Evers:

This letter is the third interim response to your March 18, 2020, Freedom of Information Act (FOIA) request.

American Oversight requests that HHS produce the following records as soon as practicable, and at least within twenty business days:

All email communications (including email messages, complete email chains, email attachments, calendar invitations) sent by the government officials specified below containing any of the following key terms:

1. Coronavirus
2. Corona
3. Virus
4. Disease
5. Pandemic
6. Epidemic
7. Outbreak
8. containment
9. "public health emergency"
10. "COVID-19"
11. "COVID 19"
12. COVID19
13. SARS
14. "2019-nCoV"
15. POTUS
16. Test
17. Tests
18. Testing
19. EUA
20. Emergency
21. Wuhan
22. Hoax
23. Hubei
24. Princess
25. Cruise
26. Kirkland
27. Seattle
28. "New Rochelle"
29. "BioGen Conference"
30. CPAC
31. AIPAC
32. RNA
33. "Extraction kits"

34. Roche
35. Vaccine
36. Antiviral
37. Antiretroviral
38. Quarantine
39. Distancing
40. Isolation
41. N95
42. Mask
43. Respirator

Government Officials

1. Alex Azar, Secretary
2. Brian Harrison, Chief of Staff
3. Eric Hargan, Deputy Secretary
4. Jerome Adams, Surgeon General
5. Robert Kadlec, Assistant Secretary for Preparedness and Response
6. John Brooks, Senior Advisor to the Secretary for Drug Pricing Reform

On February 10, 2021, you narrowed your request per the following:

Eliminate attachments, documents regarding “Red Dawn” and obvious marketing and news bulletins

- a. Limit the date range of the following key terms as stand-alone search terms from January 15, 2020 through February 29, 2020. ~~[[Limit responsive records to those that also include: (Test OR Tests OR Vaccine OR EUA OR “Emergency Use” OR Shortage OR Shortages OR Supplies OR “the WHO” OR States OR Governor OR Governors OR PPE OR Ventilators OR Respirators OR Swabs OR DPA OR “Defense Production Act” OR Trump OR Pence OR Jared OR Kushner OR “White House” OR “the WH”)]]~~

- i. Coronavirus
- ii. Corona
- iii. “COVID-19”
- iv. “COVID 19”
- v. COVID19
- vi. “2019-nCoV”

~~vii. SARS~~

~~viii. Epidemic~~

~~ix. Pandemic~~

~~x. Outbreak~~

~~xi. “Public Health Emergency”~~

-

- b. After March 1, 2020, for the key terms listed in Column A below (the same search terms as identified above), limit responsive records to those that also include one or more of the terms from Column B:

Column A	Column B
• Coronavirus • Corona • “COVID-19” • “COVID 19” • COVID19 • “2019-nCoV” • SARS • Epidemie • Pandemie • Outbreak • “Public Health Emergency”	• Test • Tests • Vaccine • Antiviral • Antiretroviral • EUA • “Emergency Use” • Shortage • Shortages • Supplies • “Emergency Use” • EUA • “the WHO” • “W.H.O.” • “World Health Organization” • States • Governor • Governors • PPE • Ventilators • Respirators • Swabs • DPA • “Defense Production Act”

- c. For the key terms that are in Column A below, limit responsive records to those that also include one or more of the terms from Column B, for the full time period of the search.

Column A	Column B
• Test • Tests • “Extraction Kits”	• CV19 • “CV-19” • C19 • “C-19” • Roche • RNA • Shortage • Shortages • Supplies • “Emergency Use” • “EUA” • “the WHO” • “W.H.O.” • “World Health Organization” • States • Governor • Governors • Kit • Kits • DPA • “Defense Production Act”

- d. ~~[~500 records] For the key terms that are in Column A below, limit responsive records to those that also include one or more of the terms from Column B, for the full time period of the search.~~

Column A	Column B
---------------------	---------------------

• Vaccine • Antiviral • Antiretroviral	• CV19 • “CV-19” • C19 • “C-19” • “EUA” • “Emergency Use” • “DPA” • “Defense Production Act” • “the WHO” • “W.H.O.” • “World Health Organization”
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e. ~~[<50 records] For the key term “Emergency” limit responsive records to those that also include “DPA” or “Defense Production Act,” for the full time period of the search.~~

f. For the following key terms, please limit the time period as indicated:

i. Princess - February 1, 2020, through March 1, 2020 ~~[[Limit responsive records to those that also include: Trump OR Pence OR Jared OR Kushner OR “White House” OR “the WH”]]]~~

~~ii. [~~150 records~~] Kirkland February 24, 2020, through March 24, 2020~~

~~iii. [~~750 records~~] Seattle February 24, 2020, through March 24, 2020~~

~~iv. [~~200 records~~] “New Rochelle” March 1, 2020, through March 31, 2020~~

~~v. [~~<50 records~~] “BioGen Conference” March 1, 2020, through March 31, 2020~~

~~vi. [~~50 records~~] CPAC February 21, 2020, through March 21, 2020~~

~~vii. [~~<50 records~~] AIPAC February 21, 2020, through March 21, 2020~~

g. For the following key terms, please run the search without any modifiers and using the full date range (i.e., no changes from original search)

i. Wuhan ~~[[Limit responsive records to those that also include: Trump OR Pence OR Jared OR Kushner OR “White House” OR “the WH”]]]~~

ii. Hoax ~~[[no changes]]~~

iii. Hubei ~~[[Limit responsive records to those that also include: Trump OR Pence OR Jared OR Kushner OR “White House” OR “the WH”]]]~~

iv. POTUS ~~[[no changes]]~~

v. Cruise ~~[[Limit responsive records to those that also include: Trump OR Pence OR Jared OR Kushner OR “White House” OR “the WH”]]]~~

vi. Quarantine ~~[[Limit responsive records to those that also include: Trump OR Pence OR Jared OR Kushner OR “White House” OR “the WH”]]]~~

vii. Distancing ~~[[Limit responsive records to those that also include: Trump OR Pence OR Jared OR Kushner OR “White House” OR “the WH”]]]~~

~~viii. Isolation~~

ix. N95 ~~[[Limit responsive records to those that also include: (CV19 OR “CV-19” OR C19 OR “C-19” OR Shortage OR Shortages OR Supplies OR “Emergency Use” OR “EUA” OR “the WHO” OR States OR Governor OR Governors OR DPA OR “Defense Production Act” OR Trump OR Pence OR Jared OR Kushner OR “White House” OR “the WH”]]]~~

x. Mask ~~[[Limit responsive records to those that also include: (CV19 OR “CV-19” OR C19 OR “C-19” OR Shortage OR Shortages OR Supplies OR “Emergency Use” OR “EUA” OR “the WHO” OR States OR Governor OR Governors OR DPA OR “Defense Production Act” OR Trump OR Pence OR Jared OR Kushner OR “White House” OR “the WH”]]]~~

xi. Respirator ~~[[Limit responsive records to those that also include: (CV19 OR “CV-19” OR C19 OR “C-19” OR Shortage OR Shortages OR Supplies OR “Emergency Use” OR “EUA” OR “the WHO” OR States OR Governor OR Governors OR DPA OR “Defense Production Act” OR Trump OR Pence OR Jared OR Kushner OR “White House” OR “the WH”]]]~~

xii. Testing ~~[[Limit responsive records to those that also include: (CV19 OR “CV-19” OR C19 OR “C-19” OR Shortage OR Shortages OR Supplies OR “Emergency Use” OR “EUA” OR “the WHO” OR States OR Governor OR Governors OR DPA OR “Defense Production Act” OR Trump OR Pence OR Jared OR Kushner OR “White House” OR “the WH”]]]~~

~~xiii. Containment~~

h. Cut the following key terms completely: [[no changes]]

i. Disease

ii. Virus

The Department processed **419 pages** of potentially responsive records captured in the agency's search for FOIA request 2020-00717-FOIA-OS. After a careful review of these pages, I have determined to release **165 pages** to you in their entirety and I am further releasing **169 pages** in part, with portions redacted, pursuant to Exemptions (b)(5), and (b)(6) of the FOIA (5 U.S.C. §552 (b)(5) and (b)(6)). Furthermore, I have determined that **85 pages** should be sent for consultation to others and returned to this Department for final disposition.

FOIA exemption (b)(5) protects inter-agency or intra-agency memoranda or letters which would not be available by law to a party other than an agency in litigation with the agency. This exemption protects documents that would be covered by any privilege an agency could assert in a civil proceeding. These privileges include, among others, the deliberative process privilege, the attorney-client privilege, the attorney work-product privilege and the presidential communications privilege.

FOIA exemption (b)(6) permits a Federal agency to withhold information and records about individuals in "personnel and medical files and similar files, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy." The definition of "similar files" has historically been broadly interpreted to include a wide variety of files, and the United States Supreme Court has held that Congress intended the term "similar files" to be interpreted broadly, rather than narrowly. I have analyzed these records and find they meet the threshold requirement of this exemption. Additionally, I have reviewed and weighed the public interest in disclosure of this information against the privacy interest in nondisclosure, and found that the privacy interest outweighs the public's interest in disclosure.

We will continue to review the remaining records as efficiently and expeditiously as possible, consistent with our available resources. Should you have questions or concerns regarding the Department's response and/or the processing of your request, any such issues should be communicated to your legal counsel and Department of Justice Attorney representing the Department in this matter.

Sincerely yours,



Alesia Y. Williams
Director, FOIA Appeals and Litigations
FOI/Privacy Act Division

Enclosure(s)

From:	OS Secretarys Operations Center </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=32B1F28D808B43B6903C00083291303E-SECRETARYS>
To:	OS Secretarys Operations Center </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=32b1f28d808b43b6903c00083291303e-Secretarys>
Subject:	COVID-19 Morning CDC Update 01Mar20
Date:	2020/03/01 12:17:07
Priority:	Normal
Type:	Note

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COVID-19 Response update Mar 1, 2020

INTERNAL - NOT FOR FURTHER DISTRIBUTION

Data Current as of Mar 1, 2020 12:00 AM (EST)

Daily Report Summary (*updated information in red*)

1. # of total cases in the U.S. undergoing screening at CDC: **663 Persons Under Investigation**
2. # of cases screened by CDC that were confirmed not to be coronavirus: **450 Persons with negative test results***
3. # of total confirmed cases in China: **79,824**
4. # of total confirmed deaths in China: **2,870**
5. # of international cases and locations – **see table below**
6. # of total confirmed international (non-China) deaths: **107**
7. Since February 3, **18** air travel passengers from China have met the definition/placed under quarantine by Federal, State, and/or Local authorities, of which **5** remain under quarantine

** Note on "2. # cases screened...not confirmed to be coronavirus...": State and local health departments have increased testing markedly in the last week. Because CDC does not have visibility on all state and local case investigations—particularly those whose lab results are negative—and because state and local jurisdictions are no longer accurately reporting this statistic, this is the last day that this number will be reported.*

Domestic Updates

1. US COVID-19 Cases Not Associated with Repatriation

- 8 states/territories reporting 15 US confirmed cases and 11 presumptive cases
- 45 states/territories reporting 663 US PUIs

International Updates

Confirmed COVID-19 cases and deaths by location (Total Countries = 62)
(as of 11:59 PM 29 Feb)

Location by WHO Region	Date First Case Reported	Date Most Recent Case Reported	Confirmed Cases	New Cases	Deaths	Acquired Locally*
<i>China</i>	31-Dec-19	29-Feb-20	79,824	573	2,870	✓
AFRO						
<i>Algeria</i>	25-Feb-20	25-Feb-20	1	-	0	
<i>Nigeria</i>	27-Feb-20	27-Feb-20	1	-	0	
EMRO						
<i>Afghanistan</i>	24-Feb-20	24-Feb-20	1	-	0	
<i>Bahrain</i>	24-Feb-20	29-Feb-20	41	3	0	
<i>Egypt</i>	14-Feb-20	14-Feb-20	1	-	0	
<i>Iran</i>	19-Feb-20	29-Feb-20	593	205	43	✓
<i>Iraq</i>	24-Feb-20	29-Feb-20	13	5	0	
<i>Kuwait</i>	24-Feb-20	28-Feb-20	45	-	0	
<i>Lebanon</i>	21-Feb-20	29-Feb-20	4	1	0	
<i>Oman</i>	24-Feb-20	27-Feb-20	6	-	0	
<i>Pakistan</i>	26-Feb-20	29-Feb-20	4	2	0	
<i>Qatar</i>	29-Feb-20	29-Feb-20	1	1	0	
<i>UAE</i>	29-Jan-20	29-Feb-20	21	2	0	✓
EURO						
<i>Austria</i>	25-Feb-20	29-Feb-20	10	5	0	
<i>Azerbaijan</i>	28-Feb-20	29-Feb-20	3	2	0	
<i>Belarus</i>	28-Feb-20	28-Feb-20	1	-	0	
<i>Belgium</i>	4-Feb-20	4-Feb-20	1	-	0	
<i>Croatia</i>	25-Feb-20	28-Feb-20	5	-	0	
<i>Denmark</i>	27-Feb-20	29-Feb-20	3	1	0	
<i>Estonia</i>	27-Feb-20	27-Feb-20	1	-	0	
<i>Finland</i>	30-Jan-20	28-Feb-20	3	-	0	
<i>France</i>	24-Jan-20	29-Feb-20	100	43	2	✓

Location by WHO Region	Date First Case Reported	Date Most Recent Case Reported	Confirmed Cases	New Cases	Deaths	Acquired Locally*
<i>Georgia</i>	26-Feb-20	29-Feb-20	3	1	0	
<i>Germany</i>	27-Jan-20	28-Feb-20	66	-	0	✓
<i>Greece</i>	26-Feb-20	29-Feb-20	7	3	0	
<i>Iceland</i>	28-Feb-20	29-Feb-20	1	-	0	
<i>Ireland</i>	29-Feb-20	29-Feb-20	1	1	0	
<i>Israel</i>	21-Feb-20	29-Feb-20	7	1	0	
<i>Italy</i>	31-Jan-20	29-Feb-20	1,128	240	29	✓
<i>Lithuania</i>	27-Feb-20	27-Feb-20	1	-	0	
<i>Luxembourg</i>	29-Feb-20	29-Feb-20	1	1	0	
<i>Monaco</i>	28-Feb-20	29-Feb-20	1	1	0	
<i>Netherlands</i>	27-Feb-20	29-Feb-20	7	5	0	
<i>North Macedonia</i>	26-Feb-20	26-Feb-20	1	-	0	
<i>Norway</i>	26-Feb-20	29-Feb-20	15	11	0	
<i>Romania</i>	26-Feb-20	28-Feb-20	3	-	0	
<i>Russia</i>	31-Jan-20	31-Jan-20	2	-	0	
<i>San Marino</i>	27-Feb-20	27-Feb-20	1	-	0	
<i>Spain</i>	31-Jan-20	29-Feb-20	46	12	0	
<i>Sweden</i>	31-Jan-20	28-Feb-20	12	-	0	
<i>Switzerland</i>	25-Feb-20	29-Feb-20	18	10	0	
<i>United Kingdom</i>	31-Jan-20	29-Feb-20	23	3	0	✓
PAHO						
<i>Brazil</i>	26-Feb-20	29-Feb-20	2	1	0	
<i>Canada</i>	25-Jan-20	29-Feb-20	20	6	0	
<i>Ecuador</i>	29-Feb-20	29-Feb-20	1	1	0	
<i>Mexico</i>	28-Feb-20	29-Feb-20	4	2	0	
<i>United States⁶</i>	16-Jan-20	29-Feb-20	34	1	0	✓
SEARO						
<i>India</i>	30-Jan-20	3-Feb-20	3	-	0	
<i>Nepal</i>	24-Jan-20	24-Jan-20	1	-	0	
<i>Sri Lanka</i>	28-Jan-20	28-Jan-20	1	-	0	
<i>Thailand</i>	13-Jan-20	29-Feb-20	42	1	0	✓
WPRO						
<i>Australia</i>	25-Jan-20	29-Feb-20	26	1	1	

Location by WHO Region	Date First Case Reported	Date Most Recent Case Reported	Confirmed Cases	New Cases	Deaths	Acquired Locally*
<i>Cambodia</i>	27-Jan-20	27-Jan-20	1	-	0	
<i>Hong Kong</i>	21-Jan-20	29-Feb-20	95	1	2	✓
<i>Japan</i>	15-Jan-20	29-Feb-20	242	9	5	
<i>Macau</i>	22-Jan-20	4-Feb-20	10	-	0	✓
<i>Malaysia</i>	24-Jan-20	28-Feb-20	25	-	0	✓
<i>New Zealand</i>	28-Feb-20	28-Feb-20	1	-	0	
<i>Philippines</i>	30-Jan-20	5-Feb-20	3	-	1	✓
<i>Republic of Korea</i>	20-Jan-20	29-Feb-20	3,526	595	17	✓
<i>Singapore</i>	23-Jan-20	29-Feb-20	102	4	0	✓
<i>Taiwan</i>	21-Jan-20	29-Feb-20	39	5	1	✓
<i>Vietnam</i>	23-Jan-20	13-Feb-20	16	-	0	
<i>International conveyance (Japan)†</i>	5-Feb-20	26-Feb-20	705	-	6	✓
Total non-mainland China			7,102	1,186	107	
Grand Total			86,926	1,759	2,977	

*Acquired locally: reported cases with no known travel history from a COVID-19-affected country and no known contact with a previously confirmed case.

§Previously diagnosed Diamond Princess passengers are not included. Count includes 15 confirmed cases in the US, 3 cases among Hubei repatriation cohort, and 16 cases among the Diamond Princess cohort diagnosed after arrival to the US. See table below for breakdown

‡The cruise ship “Diamond Princess,” which arrived at Yokohama Port (Japan) on 3 February.

Very Respectfully,

Secretary’s Operations Center

U.S. Department of Health and Human Services (HHS)
Assistant Secretary for Preparedness and Response (ASPR)
200 Independence Ave. S.W.
Washington D.C. 20201
Office (202) 619-7800
Fax: 800-514-4256
Email: hhs.soc@hhs.gov



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Recipient:	OS Secretarys Operations Center </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=32b1f28d808b43b6903c00083291303e-Secretarys>
Sent Date:	2020/03/01 12:16:57
Delivered Date:	2020/03/01 12:17:07
Message Flags:	Unread

From:	OS Secretarys Operations Center </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=32B1F28D808B43B6903C00083291303E-SECRETARYS>
To:	OS Secretarys Operations Center </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=32b1f28d808b43b6903c00083291303e-Secretarys>
Subject:	COVID-19 Morning CDC Update 01Mar20
Date:	2020/03/01 12:17:06
Priority:	Normal
Type:	Note

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COVID-19 Response update Mar 1, 2020

INTERNAL - NOT FOR FURTHER DISTRIBUTION

Data Current as of Mar 1, 2020 12:00 AM (EST)

Daily Report Summary (*updated information in red*)

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EMRO						
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<i>Iran</i>	19-Feb-20	29-Feb-20	593	205	43	✓
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<i>Lebanon</i>	21-Feb-20	29-Feb-20	4	1	0	
<i>Oman</i>	24-Feb-20	27-Feb-20	6	-	0	
<i>Pakistan</i>	26-Feb-20	29-Feb-20	4	2	0	
<i>Qatar</i>	29-Feb-20	29-Feb-20	1	1	0	
<i>UAE</i>	29-Jan-20	29-Feb-20	21	2	0	✓
EURO						
<i>Austria</i>	25-Feb-20	29-Feb-20	10	5	0	
<i>Azerbaijan</i>	28-Feb-20	29-Feb-20	3	2	0	
<i>Belarus</i>	28-Feb-20	28-Feb-20	1	-	0	
<i>Belgium</i>	4-Feb-20	4-Feb-20	1	-	0	
<i>Croatia</i>	25-Feb-20	28-Feb-20	5	-	0	
<i>Denmark</i>	27-Feb-20	29-Feb-20	3	1	0	
<i>Estonia</i>	27-Feb-20	27-Feb-20	1	-	0	
<i>Finland</i>	30-Jan-20	28-Feb-20	3	-	0	
<i>France</i>	24-Jan-20	29-Feb-20	100	43	2	✓

Location by WHO Region	Date First Case Reported	Date Most Recent Case Reported	Confirmed Cases	New Cases	Deaths	Acquired Locally*
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<i>Germany</i>	27-Jan-20	28-Feb-20	66	-	0	✓
<i>Greece</i>	26-Feb-20	29-Feb-20	7	3	0	
<i>Iceland</i>	28-Feb-20	29-Feb-20	1	-	0	
<i>Ireland</i>	29-Feb-20	29-Feb-20	1	1	0	
<i>Israel</i>	21-Feb-20	29-Feb-20	7	1	0	
<i>Italy</i>	31-Jan-20	29-Feb-20	1,128	240	29	✓
<i>Lithuania</i>	27-Feb-20	27-Feb-20	1	-	0	
<i>Luxembourg</i>	29-Feb-20	29-Feb-20	1	1	0	
<i>Monaco</i>	28-Feb-20	29-Feb-20	1	1	0	
<i>Netherlands</i>	27-Feb-20	29-Feb-20	7	5	0	
<i>North Macedonia</i>	26-Feb-20	26-Feb-20	1	-	0	
<i>Norway</i>	26-Feb-20	29-Feb-20	15	11	0	
<i>Romania</i>	26-Feb-20	28-Feb-20	3	-	0	
<i>Russia</i>	31-Jan-20	31-Jan-20	2	-	0	
<i>San Marino</i>	27-Feb-20	27-Feb-20	1	-	0	
<i>Spain</i>	31-Jan-20	29-Feb-20	46	12	0	
<i>Sweden</i>	31-Jan-20	28-Feb-20	12	-	0	
<i>Switzerland</i>	25-Feb-20	29-Feb-20	18	10	0	
<i>United Kingdom</i>	31-Jan-20	29-Feb-20	23	3	0	✓
PAHO						
<i>Brazil</i>	26-Feb-20	29-Feb-20	2	1	0	
<i>Canada</i>	25-Jan-20	29-Feb-20	20	6	0	
<i>Ecuador</i>	29-Feb-20	29-Feb-20	1	1	0	
<i>Mexico</i>	28-Feb-20	29-Feb-20	4	2	0	
<i>United States[§]</i>	16-Jan-20	29-Feb-20	34	1	0	✓
SEARO						
<i>India</i>	30-Jan-20	3-Feb-20	3	-	0	
<i>Nepal</i>	24-Jan-20	24-Jan-20	1	-	0	
<i>Sri Lanka</i>	28-Jan-20	28-Jan-20	1	-	0	
<i>Thailand</i>	13-Jan-20	29-Feb-20	42	1	0	✓
WPRO						
<i>Australia</i>	25-Jan-20	29-Feb-20	26	1	1	

Location by WHO Region	Date First Case Reported	Date Most Recent Case Reported	Confirmed Cases	New Cases	Deaths	Acquired Locally*
<i>Cambodia</i>	27-Jan-20	27-Jan-20	1	-	0	
<i>Hong Kong</i>	21-Jan-20	29-Feb-20	95	1	2	✓
<i>Japan</i>	15-Jan-20	29-Feb-20	242	9	5	
<i>Macau</i>	22-Jan-20	4-Feb-20	10	-	0	✓
<i>Malaysia</i>	24-Jan-20	28-Feb-20	25	-	0	✓
<i>New Zealand</i>	28-Feb-20	28-Feb-20	1	-	0	
<i>Philippines</i>	30-Jan-20	5-Feb-20	3	-	1	✓
<i>Republic of Korea</i>	20-Jan-20	29-Feb-20	3,526	595	17	✓
<i>Singapore</i>	23-Jan-20	29-Feb-20	102	4	0	✓
<i>Taiwan</i>	21-Jan-20	29-Feb-20	39	5	1	✓
<i>Vietnam</i>	23-Jan-20	13-Feb-20	16	-	0	
<i>International conveyance (Japan)†</i>	5-Feb-20	26-Feb-20	705	-	6	✓
Total non-mainland China			7,102	1,186	107	
Grand Total			86,926	1,759	2,977	

*Acquired locally: reported cases with no known travel history from a COVID-19-affected country and no known contact with a previously confirmed case.

§Previously diagnosed Diamond Princess passengers are not included. Count includes 15 confirmed cases in the US, 3 cases among Hubei repatriation cohort, and 16 cases among the Diamond Princess cohort diagnosed after arrival to the US. See table below for breakdown

‡The cruise ship “Diamond Princess,” which arrived at Yokohama Port (Japan) on 3 February.

Very Respectfully,

Secretary’s Operations Center

U.S. Department of Health and Human Services (HHS)
Assistant Secretary for Preparedness and Response (ASPR)
200 Independence Ave. S.W.
Washington D.C. 20201
Office (202) 619-7800
Fax: 800-514-4256
Email: hhs.soc@hhs.gov



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Sender:	OS Secretarys Operations Center </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=32B1F28D808B43B6903C00083291303E-SECRETARYS>
Recipient:	OS Secretarys Operations Center </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=32b1f28d808b43b6903c00083291303e-Secretarys>
Sent Date:	2020/03/01 12:16:57
Delivered Date:	2020/03/01 12:17:06

From:	Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>
To:	Lawler, James V <(b)(6)@unmc.edu>; Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.roup (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Carter Mecher <(b)(6)@charter.net>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>
CC:	Caneva, Duane (DHS.GOV) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b6ba3c00c7944e1b99ed3eecab996186-Duane.Canev>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>; Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject:	Re: VA Projections using Cruise Ship Data
Date:	2020/03/01 12:31:42
Priority:	Normal
Type:	Note

We briefed this at ASPR. There are slides from HK MOH shared with BARDA regarding where to put MCM investments (NPI, vs. vaccine vs biologics).

In that data, HK MOH and Guam Le, of SARS fame, reported the following for only Jan 1 - Feb 1:

1. • Current A/influenza and lower levels of B/influenza-as shown by respiratory viral panel and rapid A/flu tests did not deviate from influenza reporting seen in Guangdong or Nanjing and were slightly **higher** than 2018-19 transmission season
2. • COVID19 levels rose steadily during the Jan 15-Feb 1 date. These cases were **additive** to to MGH partner hospitals: Queen Mary, Hong Kong Adventists, Baptist and Gleneagle hospitals. The numbers do not include co-infection with flu, and do not include secondary risk factors (age, CKI, COPD, Diabetes or use of DMARDS/biologics_)
3. • Hong Kong is a great model for US, as bed count is close to CONUS Cities, demographics include significant middle income demographics and a community sector that is avoidant of central authority (Beijing).

Summary from that data: C19 appears to be additive to burden of ILI in HK, that these cases did not look at coinfection (and thus might be overstating severity).

I would suggest we **re-convene** the webex with **Guam Li**/HK MOH so we do not have to wait for the Feb 29 data. It would be most helpful to have others on this threat also hear this information.

This can be done under MITRE, RM, MGH or under the ASPR.

Added point: Hong Kong MOH was important at notifying friendly nations (Singapore, Canada) of inbound travelers from region who transitted via HKG (HK Intl. Airport) enroute to other sites. This information was not shared with CDC .

From: Lawler, James V <(b)(6)@unmc.edu>

Sent: Sunday, March 1, 2020 12:09 PM

To: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Carter Mecher <(b)(6)@charter.net>

Cc: Caneva, Duane (DHS.GOV) <duane.caneva@hq.dhs.gov>; Callahan, Michael V., M.D.

(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>; Marcozzi, David (b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert (b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

External Email - Use Caution

Interesting question. I think that flu is on downturn by itself. The more dramatic differential in week 8 could reflect –

1. • Normal variation that occurs outside peak flu times, that lots of other resp viruses circulate
2. • COVID predominance in ILI now that it is taking off and flu is on decline.

Given the ILI rate now double what lab confirmed flu %positive rate, that seems like a significant change.

James Lawler, MD, MPH, FIDSA

m (b)(6)

(b)(6)@unmc.edu

From: "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>

Date: Sunday, March 1, 2020 at 11:03 AM

To: Carter Mecher (b)(6)@charter.net>

Cc: "Lawler, James V" (b)(6)@unmc.edu>, "Caneva, Duane (DHS.GOV)"

(b)(6)@hq.dhs.gov>, "Callahan, m." (b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <charity.dean@cdph.ca.gov>, "Marcozzi, David"

(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert

(b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Is it your judgement that COVID is pushing/crowding Influenza out?

Sent from my iPhone

On Mar 1, 2020, at 10:08 AM, Carter Mecher (b)(6)@charter.net> wrote:

Was able to find South Korea flu surveillance.

<https://www.cdc.go.kr/board/board.es?mid=a30504000000&bid=0033> [cdc.go.kr]

I pulled the data for weeks 49-8 (it doesn't look like ILI is much help).

Week	ILI Rate	%Positive Samples for Influenza
------	----------	---------------------------------

49	19.5%	18.6%
50	28.5%	16.2%
51	37.8%	25.9%
52	49.8%	35.1%
1	49.1%	43.4%
2	47.8%	40.6%
3	42.4%	37.6%
4	40.9%	43.4%
5	28.0%	40.9%
6	16.4%	16.7%
7	11.6%	15.8%
8	8.5%	3.9%

<6ECD810E8CEE448097E96CCC06727521.png>

Sent from Mail [protect2.fireeye.com] for Windows 10

From: Lawler, James V

Sent: Sunday, March 1, 2020 8:43 AM

To: Kadlec, Robert (OS/ASPR/IO); Carter Mecher; Caneva, Duane (DHS.GOV); Callahan, Michael V.,M.D.; Dean, Charity A@CDPH

Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

As Carter points out, Wuhan and other cities started way too late.

James Lawler, MD, MPH, FIDSA
 Director, International Programs & Innovation
 Global Center for Health Security, and
 Associate Professor of Medicine
 Division of Infectious Diseases
 University of Nebraska Medical Center

m: (b)(6)

(b)(6)@unmc.edu

<8652377C655D4CE6946BE0A9C3B0144B.png>

From: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>

Sent: Sunday, March 1, 2020 7:25:22 AM

To: Carter Mecher <(b)(6)@charter.net>; Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV [dhs.gov]) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D.

<(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>

Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>;

Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert

<(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Here is something to ponder from the China CDC report from a couple of days ago.

“A main finding of this characterization and exploratory analysis of the first 72,314 cases of COVID-19 found in China in the 40 days between first recognition of the outbreak of pneumonia with unknown etiology on December 31, 2019 to the end of the study period on February 11, 2020 is that this novel coronavirus is highly contagious. It has spread extremely rapidly from a single city to the entire country within only about 30 days. Moreover, it has achieved such far-reaching effects even in the face of extreme response measures including the complete shutdown and isolation of whole cities, cancellation of Chinese New Year celebrations, prohibition of attendance at school and work, massive mobilization of health and public health personnel as well as military medical units, and rapid construction of entire hospitals.”

From: Carter Mecher <(b)(6)@charter.net>

Sent: Sunday, March 1, 2020 7:58 AM

To: Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV [dhs.gov])

<(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>

Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>;

Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Kadlec, Robert

(OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert <(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

James said something to me that I do want to frame on the good wall (not the bad wall of understatements).

He gave a presentation to education leaders and I'm paraphrasing: With pandemic flu we would close the schools to protect the kids and reduce community transmission. With COVID we would close the

schools (not so much to protect the kids), but to reduce community transmission and protect their grandparents.

James can phrase it better than I can—but that is the message. Tom are you listening?

Sent from Mail [protect2.fireeye.com] [protect2.fireeye.com] for Windows 10

From: Lawler, James V

Sent: Sunday, March 1, 2020 7:41 AM

To: Carter Mecher; Caneva, Duane; Callahan, Michael V., M.D.; Dean, Charity A@CDPH

Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

Listening to CNN “experts” this morning. They have no clue what they are talking about – saying that young people really shouldn’t worry and older/vulnerable folks are the only ones that should be changing behavior. No concept that our elders are depending on the actions of the entire community and also that once the healthcare system collapses, all of the services for which younger folks access that system will be gone as well. We have to get out in front of messaging.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: Carter Mecher (b)(6)@charter.net>

Date: Sunday, March 1, 2020 at 6:20 AM

To: "Caneva, Duane" (b)(6)@hq.dhs.gov>, "Lawler, James V"

(b)(6)@unmc.edu>, "Callahan, m." (b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <charity.dean@cdph.ca.gov>

Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu>, Richard Hatchett

<richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)"

<matthew.j.hepburn.civ@mail.mil>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>,

Tom Bossert (b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Also have been thinking more about thresholds for pulling triggers.

I thought a but more about what James said about true prevalence—that it would be at least twice as high as we currently think it is on the cruise ship. That would mean that true attack rate is closer to 40%, 80% of cases are asymptomatic, 6% of cases are hospitalized, 1% are critical (in ICU), and CFR is about 0.5%. But given the demographics of the cruise ship we are really the diluting effect of kids and young adults. They would be expected to have high attack rates and even higher rates of asymptomatic disease and mild disease (pushing up the % asymptomatics, reducing the overall hospitalization rate, ICU rate and CFR). So wanted to play with those estimates of thresholds again (will resend updated math).

Yesterday I was at my daughter's house helping them pull out vines that were planted as ground cover. The damn things grow everywhere, climbing up trees and smothering them (this isn't kudzu). My wife said something about these vines that made me think of what we are seeing in South Korea, Italy and now the US. When you plant these vines, they go thru 3 stages—sleep, creep, and leap. First year they don't seem to be doing much—they sleep (but they are laying down a root system that you cannot see). The next year they creep (seeing some spread above ground while the root system hidden from view continues to spread). And the next year they leap (the vines seem to explode everywhere you look).

That is exactly what Italy feels like (but speeded up). We are blind to what is “happening underground.” The root system is really those dendrite transmission trees that Richard likes. I pulled out the Singapore graphic again of their contact tracing of cases (that is the root system). They have given up continuing to update that graphic and only providing linkages between cases when they provide brief summaries of individual cases. Probably getting to complex to show.

<image001.png>

In the US we just pulled up three random roots that are far from any plants we can see above the surface. My concern is that we are at the cusp of “leap” and cases are going to start popping like popcorn wherever we look.

This gets to the timing of NPIs

I went back to the Philadelphia-St Louis comparison of 1918. The difference between Philadelphia and St. Louis in 1918 in terms when they pulled the trigger on NPIs was about two weeks during the course of their individual outbreaks. In St. Louis, NPIs were put in place 1 week after the first cases at Jefferson Barracks, 5 days after the first death, and 3 days after the first civilian cases in St. Louis. In Philadelphia, NPIs were put in place 3 weeks after the first cases at the Navy Yard, 16 days after the first civilian cases in Philadelphia, 2 weeks after the first death.

We would estimate that the outbreak in Wuhan had about a 2 week head start on the rest of Hubei. So the measures China implemented to slow transmission happened about two later in the course of the outbreak in Wuhan compared to the rest of Hubei Province. A comparison of hospitalization rate looks a lot like Philadelphia and St. Louis.

Hong Kong confirmed its first case of a traveler from Wuhan on Jan 23 (symptom onset of Jan 18). They would later learn of their first case of local transmission with symptom onset on Jan 22. On Jan 25, within 1 week of the symptom onset of the first case of a traveler and within 3 days of symptom onset of the first local case, they were already taking actions like suspending the reopening of schools—they were a bit lucky because the schools were closed for the Chinese New Year. So they took aggressive actions within 1 week of first recognized case. There was a lot of activity in Hong Kong in the first 3 weeks of January (large number of suspected cases that they were monitoring but they were only had syndromic surveillance since there were no diagnostics early on. So Hong Kong had been busy isolating scores of patients during the first 3 weeks of January based only on clinical presentation.

Singapore confirmed its first case on January 23 (traveler from Wuhan). The individual had symptom onset on Jan 20 on a flight to Singapore. On Feb 3, Singapore confirmed its first case of local transmission. Symptom onset for that individual was on Jan 29. On Feb 7, Singapore identified additional

cases of local transmission and declared Code Orange and intensifies response. So Singapore takes aggressive action two weeks after confirmation of 1st case in a traveler and within 4 days of first case of local transmission.

Sent from Mail [go.microsoft.com] [protect2.fireeye.com] [protect2.fireeye.com] for Windows 10

From: Carter Mecher

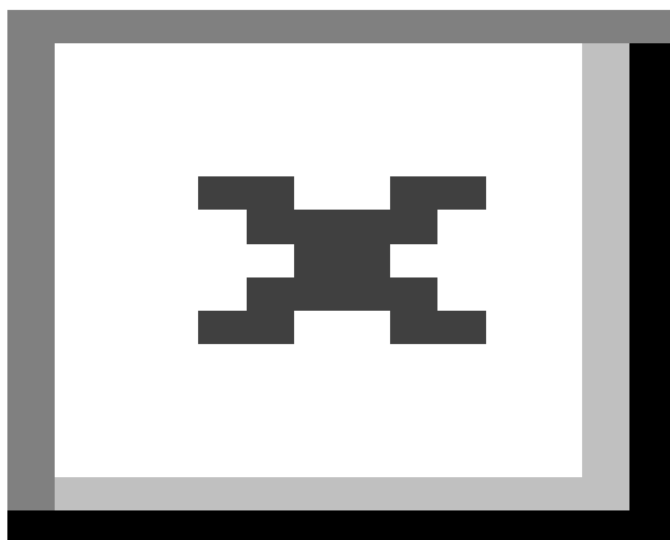
Sent: Sunday, March 1, 2020 5:58 AM

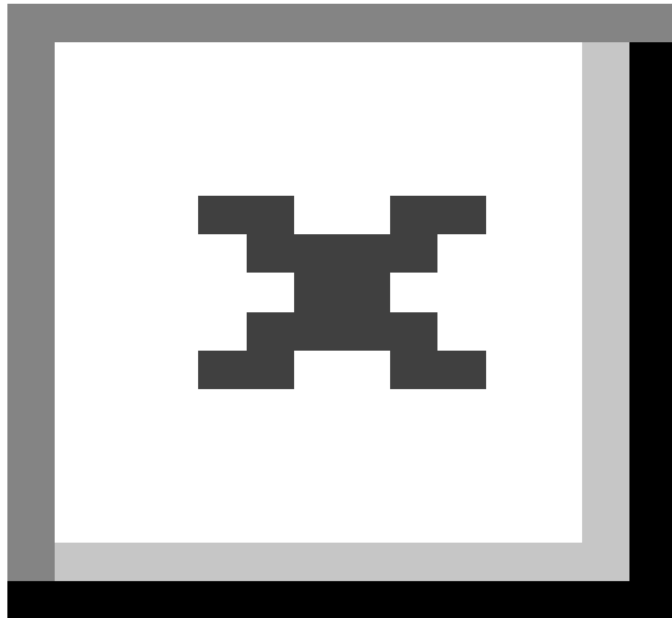
To: Caneva, Duane; Lawler, James V; Callahan, Michael V.,M.D.; Dean, Charity A@CDPH

Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: RE: VA Projections using Cruise Ship Data

A few things for the group. Have been interested in whether we can see anything happening with flu surveillance (especially ILI) in places with COVID outbreaks, Am interested in looking at Japan, Hong Kong, Singapore, and Italy. So far, only found Hong Kong (Eva Lee found it). I will keep looking—really interested in South Korea and Italy to get a better sense of whether looking st ILI will be of any value. https://www.chp.gov.hk/files/pdf/fluexpress_week8_27_2_2020_eng.pdf [chp.gov.hk] [protect2.fireeye.com] [protect2.fireeye.com] This is data thru Feb 22 (week 8). Hong Kong is really do a good job of surveillance. And what they are doing in terms of NPIs seems to be working (just like Singapore).





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From: [Caneva, Duane](#)

Sent: Saturday, February 29, 2020 11:18 PM

To: [Lawler, James V](#); [Carter Mecher](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: Re: VA Projections using Cruise Ship Data

+ Charity

CA seems first up.

Get Outlook for iOS [aka.ms] [protect2.fireeye.com] [protect2.fireeye.com]

From: Lawler, James V (b)(6)@unmc.edu
Sent: Saturday, February 29, 2020 11:06:20 PM
To: Carter Mecher (b)(6)@charter.net; Callahan, Michael V., M.D. (b)(6)@mgh.harvard.edu
Cc: Marcozzi, David (b)(6)@som.umaryland.edu; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane (b)(6)@hq.dhs.gov; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert (b)(6)@me.com
Subject: Re: VA Projections using Cruise Ship Data

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

Math looks good, Carter. And your calculations are enlightening. I had thought that hospital and ICU surveillance would be too late, but if you can do 100% surveillance on SARI in ICUs, then you might be able to act in time. Assume ICU is 1/5th of severe cases requiring hospitalization, then you are looking at roughly 12 cases per million. Let's assume 50% ascertainment rate for ICU, so when you detect 5-6 ICU COVID per million, you have hit your trigger. This assumes homogeneous distribution in communities, which is probably not true. So we may need to focus on certain segments (people from Chinatown in NY who are expected to have closer links to travelers from outbreak areas early) and have lower trigger – first 1-2 cases.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher (b)(6)@charter.net
Date: Saturday, February 29, 2020 at 6:53 PM
To: "Lawler, James V" (b)(6)@unmc.edu, "Callahan, m." (b)(6)@mgh.harvard.edu
Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" (b)(6)@hq.dhs.gov, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert (b)(6)@me.com
Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Something I have been thinking about wrt thresholds for NPIs. We usually think of the window for implementing NPIs as before 1% prevalence. But this disease has more than 50% asymptomatics, so the threshold is really 0.5% prevalence of any symptoms (including very mild symptoms). But CDC criteria for testing is severe disease. Let's say that 5% of those who are infected have severe disease, that means our threshold is 1%*5% = 0.05%. But it takes 2 weeks or so before a patient who is infected

becomes seriously ill. Over the span of 2 weeks plus the lag time for testing, the outbreak could have had at least 3 doublings (so an 8-fold increase). That may be conservative. So we are really talking about a threshold of close to $0.05\%/8 = 0.00625\%$. For a city of 1 M, that is 62 serious cases, 625 symptomatic, 1,250 infected. In 2 weeks, these numbers could be 500 serious, 5,000 symptomatic, 10,000 infected (the 1% threshold). Once you are there, the window is closed. If we assume a 3 week lag from infection onset to death, the number of deaths would be based on a denominator of 3 weeks ago, so divide 1,250 infected by roughly 3 (assume cases triple in a week), to get 400. Assume a CFR of 0.8%, so about 3 deaths. More than 3 deaths per million population is probably too late. Somebody could check my math.

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From: Lawler, James V

Sent: Saturday, February 29, 2020 5:31 PM

To: Callahan, Michael V., M.D.

Cc: Marcozzi, David; Carter Mecher; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Caneva, Duane; Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

Agree. We have set our d/c criteria for persons in isolation (documented infection) at improved sx's, afebrile x48 hrs (off antipyretics) and swab neg X3 24 hrs apart.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Callahan, m." (b)(6)@mgh.harvard.edu>

Date: Saturday, February 29, 2020 at 2:39 PM

To: "Lawler, James V" (b)(6)@unmc.edu>

Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu>, Carter Mecher

(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane"

(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert (b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Not great.....Better than poorly performed Induced sputum for AFB !

James, results from a 3rd Deep nasal swab could help us establish a viable protocol my 2 cents.

Michael Callahan MD MSPH DTM&H, DMCC (UK)
Director, Mass-Casualty Infection Operations
Vaccine & Immunotherapy Center
Massachusetts General Hospital

Boston, MA

Special Advisor to the Assistant Secretary of Public Health Preparedness and Response
U.S Dept of Health and Human Services
O'Neil Building 6th Floor
Washington, DC

On Feb 29, 2020, at 05:35, Lawler, James V <(b)(6)@unmc.edu> wrote:

External Email - Use Caution

NP x2 = 75% sensitivity, if my probability skilz are correct.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: "Marcozzi, David" <(b)(6)@som.umaryland.edu>
Date: Saturday, February 29, 2020 at 5:11 AM
To: "Lawler, James V" <(b)(6)@unmc.edu>, Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Wow, NP still misses 50%?

Can we assume this increase in magnitude (x2-3) for anyplace doing testing with NP? How much more sensitive with NP x2? That is what we do at Maryland.

Respectfully,

David Marcozzi, MD, MHS-CL, FACEP
Associate Professor
Associate Chair of Population Health
Department of Emergency Medicine
University of Maryland School of Medicine
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Take time to deliberate; but when the time for action arrives, stop thinking and go in.
President Andrew Jackson

From: James Lawler <(b)(6)@unmc.edu>
Date: Friday, February 28, 2020 at 19:57
To: Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, David Marcozzi <(b)(6)@som.umaryland.edu>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Duane Caneva <(b)(6)@hq.dhs.gov>, Robert Kadlec <Robert.Kadlec@hhs.gov>, (b)(6)@mgh.harvard.edu, (b)(6)@mgh.harvard.edu, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Interestingly Japanese health folks only did OP swabs x1. NP swabs are much more sensitive. OP for us about half as sensitive (or less). NP already misses 50% with a single swab. So would probably multiply Japanese swab + by 2-3 to get true infection rate.

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From: Carter Mecher <(b)(6)@charter.net>
Sent: Friday, February 28, 2020 3:06:10 PM
To: Richard Hatchett <richard.hatchett@cepi.net>; Lawler, James V <(b)(6)@unmc.edu>; Marcozzi, David <(b)(6)som.umaryland.edu>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Tom Bossert <(b)(6)@me.com>
Subject: VA Projections using Cruise Ship Data

Non-UNMC email

I wanted to bounce this around the smaller group of wolverines. I also pulled the numbers of deaths annually in veterans and estimated deaths for all 19 M veterans using age specific death rates for males. The interesting thing is that the numbers of projected deaths related to COVID are actually pretty small compared to what we normally see for veterans. The challenge will be the amount of acute care—especially ICU care. The only chance that VA has is that we can knock down the attack rate thru TLC. The demand for acute care is overwhelming. The system would collapse under that level of demand.

Estimates of the impact of COVID on VA

In FY2019, VA cared for 6,271,019 unique veterans and had 9,237,638 veteran enrollees.

The Diamond Princess cruise ship outbreak can provide invaluable insights into the potential impact to VA.

Below is a comparison of the US population, the adult population aboard the cruise ship, and the Veteran population.

AGE	US Population 2017	% Distribution	Cruise Ship Passengers & Crew	% Distribution	FY2019 Veterans Vet Pop	% Distribution
20-29 years	45,489,095	19%	347	9%	932,473	5%
30-39 years	43,204,209	18%	428	12%	1,989,045	10%
40-49 years	40,617,231	17%	334	9%	2,194,505	11%
50-59 years	43,409,050	18%	398	11%	3,169,787	17%
60-69 years	36,824,083	15%	923	25%	3,735,399	19%
70-79 years	21,588,326	9%	1,015	27%	4,405,551	23%

>80 years	12,433,972	5%	227	6%	2,782,943	14%
Total population	243,565,966	100%	3,672	100%	19,209,704	100%

The Veteran population is similar to the Diamond Princess cruise ship population. If anything, the veteran population is even older (so at even higher risk). There were 3,711 passengers and crew aboard the crew ship (1,045 crew and 2,666 passengers). As of February 28, 2020, there have been 751 confirmed cases of COVID (attack rate of 20%). There have been 6 deaths thus far (lower limit of a case fatality rate of 0.80%). [A timeline of the outbreak is provided at the bottom of this message.] 380 of the confirmed cases were asymptomatic (50.6%). It is estimated that approximately 12-15% of the 751 passengers and crew with confirmed disease required acute care with 36 hospitalized patients reported to be in serious condition (5%). We looked at a range of ICU admissions (2%-5% of those who become infected).

Given the similarities of the demographics of the cruise ship and veterans, we could project the potential impact on veterans.

Veterans	Population FY2019	Total Infected (20% AR)	Number Asymptomatic (50.6%)	Hospitalizations 12%	ICU Admissions 2%	ICU Admissions 5%	Deaths CFR 0.80%
All Veterans	19,209,704	3,841,941	1,944,022	461,033	76,839	192,097	30,736
Veteran Enrollees	9,237,638	1,847,528	934,849	221,703	36,951	92,376	14,780
Veteran Uniques	6,271,019	1,254,204	634,627	150,504	25,084	62,710	10,034

Need to place these numbers into perspective.

Acute Inpatient Care	VHA Total
Operating Beds Hospital	15,744
Operating Beds Medicine/Surgery	9,817
Operating Beds ICU	1,692
ADC Hospital	9,805
ADC Medicine/Surgery	6,225
ADC ICU	1,101

ADC On a Ventilator	240
Daily Hospital Admissions	1,641
Daily Admissions Medicine/Surgery	1,226
Daily Admissions/Transfers in ICU	389
Emergency Department Care	
Daily ER Visits	6,874
Outpatient Care (non-ER)	
Daily Clinic Visits	209,336

The estimated number of deaths for all 19 M veterans is ~556,000. The number of annual deaths of veteran enrollees in FY2019 was 350,737. The projected number of COVID deaths for veterans is 14,780

The number of veterans who had an acute care hospitalization in FY2019 and died at any time during FY2019 was 62,375. The number of COVID deaths projected in veteran uniques (users) is 10,034.

Annually, VA has:

- 600,000 acute (medical/surgical) admissions
- 140,000 ICU admissions
- 2.5M ER/Urgent Care visits

If we assume that this outbreak will last approximately 3 months, we can then overlay the projected demand upon the usual background utilization over 3 months.

Even if we simply focus on the veteran uniques (veterans who used VA services and not enrollees), the numbers are a little overwhelming. We assumed that there might be 3 ER visits for each admission--so roughly 450,000 ER visits, 150,000 hospitalizations, and 25,000-63,000 ICU admissions.

Over an average 3-month period, VA would have ~625,000 ER/Urgent care visits, 150,000 acute care admissions, and 35,000 ICU admissions.

We assumed that acutely ill COVID patients will have long lengths of stay (14-21 days). If VA needs to absorb 150,000 hospitalizations (each with a LOS of 14-21 days), it would require 2.1 M to 3.2 M BDOCs.

If we assumed 14 day LOS for each ICU admission, 25,000-63,000 ICU admissions would equate to 350,000-882,000 ICU BDOCs.

The VA has 15,744 hospital operational beds (runs an ADC of only 9,805). Even if VA mobilized all those potential beds (15,744), for 3 months (90 days), we would generate the capacity for 1.4 M BDOCs.

Demand for care would exceed capacity by 700K BDOCs for a 14 day LOS and 1.7M BDOCs for a LOS of 21 days (1.5-2.2 times maximum capacity).

The VA has 1,692 ICU beds (runs an ADC of 1,101). Mobilizing all 1,692 ICU beds for 3 months (90 days), we would generate 152,000 BDOCs. Demand for ICU care would exceed capacity by 200,000-730,000 ICU BDOCs (2-5 times existing capacity).

This demand for care would not be constant across the 3 month period. The demand would rise exponentially, plateau, and then fall. The real concern is what will happen during the peak period of the epidemic.

VA does not have enough capacity to meet this demand, even if it mobilized every potential hospital bed to care for COVID patients (and there would be no capacity to care for usual demand for non-COVID acute care). And all this will be happening with a VA workforce that will be significantly diminished due to illness, home isolation, home quarantine and childminding responsibilities related to closure of schools and daycare, and fear.

Timeline of Diamond Princess cruise ship outbreak

Date	Event	Cumulative Number of Confirmed Cases	Cumulative Number of Deaths	Note
20-Jan	Cruise ship departs from Yokohama Japan			
25-Jan	80 year old passenger disembarks in Hong Kong			
1-Feb	80 year old passenger confirmed to have COVID-19			
	When results known, certificate of landing canceled and ship under quarantine. Tests for the virus would be administered to three groups: those with symptoms, those who got off in Hong Kong, and those who had close contact with the infected passenger.			
3-Feb	Ship arrives in port of Yokohama Japan			
5-Feb	10 passengers and crew confirmed +	10		
6-Feb	31 more passengers and crew confirmed +	41		
7-Feb	30 more passenger and crew confirmed +	61		
8-Feb	9 more passenger and crew confirmed +	70		

10-Feb	66 more passenger and crew confirmed +	136		439 tes
11-Feb	39 more passenger and crew confirmed +	175		492 tes
12-Feb	28 more passenger and crew confirmed +	203		4 in IC
13-Feb	15 more passenger and crew confirmed +	218		713 tes
14-Feb	67 more passenger and crew confirmed +	285		927 tes
15-Feb	70 more passenger and crew confirmed +	355		1,211 tested; asymptomatic
16-Feb	329 American evacuated from cruise ship (14 of the evacuees found to be +) 61 Americans remained on board 44 Americans remained hospitalized in Japan	369		
17-Feb	85 more passenger and crew confirmed +	454		1,721 tested; serious
18-Feb	167 more passenger and crew confirmed +	621		3,011 tes
19-Feb	2 deaths	621	2	
20-Feb	13 more passenger and crew confirmed +	634	2	3,060 tested; seriously ill asymptomatic
23-Feb	Death reported in Japan		3	
24-Feb	Japan updates total to 691; US reports 36 in US	691	3	
25-Feb	Death reported in Japan; US reports 40 in US; UK 4; Australia 7; Hong Kong 4; Israel 2; Total 744; plus 4 not on ship	734	4	3,890 tested; seriously ill asymptomatic

26-Feb	US reports total of 42 cases in US; Japan announces that 45 of 813 former passengers have symptoms and will need to be tested; 14 new cases confirmed in the Diamond Princess cruise ship, raising the total to 705 cases inside the ship	750	4	
27-Feb	Australia (+1) 8 cases (repatriated)	751	4	
28-Feb	2 death reported in Japan	751	6	

As a check on deaths, I applied the age specific death rates per 100,000 population for the entire veteran population of 19M (90% male)

AGE	2019 VetPop	2017 Male All Cause Mortality per 100,000	Estimated 2017 All Cause Deaths
20 to 24 years	262,415	137.9	362
25 to 29 years	670,058	171.3	1,148
30 to 34 years	933,598	196.3	1,833
35 to 39 years	1,055,447	227.1	2,397
40 to 44 years	1,004,755	273.6	2,749
45 to 49 years	1,189,750	387.3	4,608
50 to 54 years	1,457,440	604.4	8,809
55 to 59 years	1,712,347	919.5	15,745
60 to 64 years	1,867,136	1,328.3	24,801
65 to 69 years	1,868,263	1,831.8	34,223
70 to 74 years	2,703,684	2,668.0	72,134
75 to 79 years	1,701,867	4,193.7	71,371
80 to 84 years	1,187,331	6,901.6	81,945
85 years and over	1,595,611	14,689.2	234,383
Total population	19,209,704	863.8	556,507

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<image001.png>

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Sender: Callahan, Michael V., M.D. (b)(6) @mgh.harvard.edu>

Recipient:	Lawler, James V <(b)(6)>@unmc.edu>; Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Carter Mecher <(b)(6)>@charter.net>; Callahan, Michael V., M.D. <(b)(6)>@mgh.harvard.edu>; Caneva, Duane (DHS.GOV) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b6ba3c00c7944e1b99ed3eecab996186-Duane.Canev>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>; Marcozzi, David <(b)(6)>@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)>@me.com>
Sent Date:	2020/03/01 12:30:47
Delivered Date:	2020/03/01 12:31:42

From:	Carter Mecher <(b)(6)@charter.net>
To:	Lawler, James V <(b)(6)@unmc.edu>; Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.roup (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>
CC:	Caneva, Duane (DHS.GOV) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b6ba3c00c7944e1b99ed3eecab996186-Duane.Canev>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>; Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject:	RE: VA Projections using Cruise Ship Data
Date:	2020/03/01 13:15:27
Priority:	Normal
Type:	Note

Good catch James. I thought I was going to find something a little more dramatic. But I also realized that this data is from week 8 ending Feb 22—things have really heated up since in South Korea. Maybe we will see something unfold in next report.

On Feb 22 South Korea had 346 cases/2 deaths. Today they are up to 3,736 case/17 deaths. So maybe too quick to judge.

What I was looking for was continued drop in flu being isolated by lab but a turn around in ILI (going back up)—divergence in the curves.

Sent from [Mail](#) for Windows 10

From: [Lawler, James V](#)
Sent: Sunday, March 1, 2020 12:09 PM
To: [Kadlec, Robert \(OS/ASPR/IO\)](#); [Carter Mecher](#)
Cc: [Caneva, Duane \(DHS.GOV\)](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#); [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Tom Bossert](#)
Subject: Re: VA Projections using Cruise Ship Data

Interesting question. I think that flu is on downturn by itself. The more dramatic differential in week 8 could reflect –

1. • Normal variation that occurs outside peak flu times, that lots of other resp viruses circulate
2. • COVID predominance in ILI now that it is taking off and flu is on decline.

Given the ILI rate now double what lab confirmed flu %positive rate, that seems like a significant change.

James Lawler, MD, MPH, FIDSA

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(b)(6)@unmc.edu

From: "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>

Date: Sunday, March 1, 2020 at 11:03 AM

To: Carter Mecher <(b)(6)@charter.net>

Cc: "Lawler, James V" <(b)(6)@unmc.edu>, "Caneva, Duane (DHS.GOV)"

<(b)(6)@hq.dhs.gov>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, "Dean,

Charity A@CDPH" <charity.dean@cdph.ca.gov>, "Marcozzi, David"

<(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn,

Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert

<(b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Is it your judgement that COVID is pushingcrowding Influenza out?

Sent from my iPhone

On Mar 1, 2020, at 10:08 AM, Carter Mecher <(b)(6)@charter.net>wrote:

Was able to find South Korea flu surveillance.

<https://www.cdc.go.kr/board/board.es?mid=a30504000000&bid=0033> [cdc.go.kr]

I pulled the data for weeks 49-8 (it doesn't look like ILI is much help).

Week	ILI Rate	%Positive Samples for Influenza
49	19.5%	18.6%
50	28.5%	16.2%
51	37.8%	25.9%
52	49.8%	35.1%
1	49.1%	43.4%
2	47.8%	40.6%
3	42.4%	37.6%
4	40.9%	43.4%
5	28.0%	40.9%
6	16.4%	16.7%
7	11.6%	15.8%
8	8.5%	3.9%

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From: Lawler, James V

Sent: Sunday, March 1, 2020 8:43 AM

To: Kadlec, Robert (OS/ASPR/IO); Carter Mecher; Caneva, Duane (DHS.GOV); Callahan, Michael V., M.D.; Dean, Charity A@CDPH

Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

As Carter points out, Wuhan and other cities started way too late.

James Lawler, MD, MPH, FIDSA
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<8652377C655D4CE6946BE0A9C3B0144B.png>

From: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>

Sent: Sunday, March 1, 2020 7:25:22 AM

To: Carter Mecher <(b)(6)@charter.net>; Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV [dhs.gov]) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D.

<(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>

Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Here is something to ponder from the China CDC report from a couple of days ago.

“A main finding of this characterization and exploratory analysis of the first 72,314 cases of COVID-19 found in China in the 40 days between first recognition of the outbreak of pneumonia with unknown etiology on December 31, 2019 to the end of the study period on February 11, 2020 is that this novel coronavirus is highly contagious. It has spread extremely rapidly from a single city to the entire country within only about 30 days. Moreover, it has achieved such far-reaching effects even in the face of extreme response measures including the complete shutdown and isolation of whole cities, cancellation of Chinese New Year celebrations, prohibition of attendance at school and work, massive mobilization of health and public health personnel as well as military medical units, and rapid construction of entire

hospitals.”

From: Carter Mecher <(b)(6)@charter.net>
Sent: Sunday, March 1, 2020 7:58 AM
To: Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV [dhs.gov]) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>
Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

James said something to me that I do want to frame on the good wall (not the bad wall of understatements).

He gave a presentation to education leaders and I’m paraphrasing: With pandemic flu we would close the schools to protect the kids and reduce community transmission. With COVID we would close the schools (not so much to protect the kids), but to reduce community transmission and protect their grandparents.

James can phrase it better than I can—but that is the message. Tom are you listening?

Sent from Mail [protect2.fireeye.com] [protect2.fireeye.com] for Windows 10

From: Lawler, James V
Sent: Sunday, March 1, 2020 7:41 AM
To: Carter Mecher; Caneva, Duane; Callahan, Michael V., M.D.; Dean, Charity A@CDPH
Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Kadlec, Robert (OS/ASPR/IO); Tom Bossert
Subject: Re: VA Projections using Cruise Ship Data

Listening to CNN “experts” this morning. They have no clue what they are talking about – saying that young people really shouldn’t worry and older/vulnerable folks are the only ones that should be changing behavior. No concept that our elders are depending on the actions of the entire community and also that once the healthcare system collapses, all of the services for which younger folks access that system will be gone as well. We have to get out in front of messaging.

James Lawler, MD, MPH, FIDSA

m (b)(6)
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From: Carter Mecher <(b)(6)@charter.net>
Date: Sunday, March 1, 2020 at 6:20 AM
To: "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Lawler, James V" <(b)(6)@unmc.edu>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, "Dean, Charity

A@CDPH" <charity.dean@cdph.ca.gov>

Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu>, Richard Hatchett
<richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)"
<matthew.j.hepburn.civ@mail.mil>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>,
Tom Bossert (b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Also have been thinking more about thresholds for pulling triggers.

I thought a but more about what James said about true prevalence—that it would be at least twice as high as we currently think it is on the cruise ship. That would mean that true attack rate is closer to 40%, 80% of cases are asymptomatic, 6% of cases are hospitalized, 1% are critical (in ICU), and CFR is about 0.5%. But given the demographics of the cruise ship we are really the diluting effect of kids and young adults. They would be expected to have high attack rates and even higher rates of asymptomatic disease and mild disease (pushing up the % asymptomatics, reducing the overall hospitalization rate, ICU rate and CFR). So wanted to play with those estimates of thresholds again (will resend updated math).

Yesterday I was at my daughter's house helping them pull out vines that were planted as ground cover. The damn things grow everywhere, climbing up trees and smothering them (this isn't kudzu). My wife said something about these vines that made me think of what we are seeing in South Korea, Italy and now the US. When you plant these vines, they go thru 3 stages—sleep, creep, and leap. First year they don't seem to be doing much—they sleep (but they are laying down a root system that you cannot see). The next year they creep (seeing some spread above ground while the root system hidden from view continues to spread). And the next year they leap (the vines seem to explode everywhere you look).

That is exactly what Italy feels like (but speeded up). We are blind to what is "happening underground." The root system is really those dendrite transmission trees that Richard likes. I pulled out the Singapore graphic again of their contact tracing of cases (that is the root system). They have given up continuing to update that graphic and only providing linkages between cases when they provide brief summaries of individual cases. Probably getting to complex to show.
<image001.png>

In the US we just pulled up three random roots that are far from any plants we can see above the surface. My concern is that we are at the cusp of "leap" and cases are going to start popping like popcorn wherever we look.

This gets to the timing of NPIs

I went back to the Philadelphia-St Louis comparison of 1918. The difference between Philadelphia and St. Louis in 1918 in terms when they pulled the trigger on NPIs was about two weeks during the course of their individual outbreaks. In St. Louis, NPIs were put in place 1 week after the first cases at Jefferson Barracks, 5 days after the first death, and 3 days after the first civilian cases in St. Louis. In Philadelphia, NPIs were put in place 3 weeks after the first cases at the Navy Yard, 16 days after the first civilian cases in Philadelphia, 2 weeks after the first death.

We would estimate that the outbreak in Wuhan had about a 2 week head start on the rest of Hubei. So the measures China implemented to slow transmission happened about two later in the course of the outbreak in Wuhan compared to the rest of Hubei Province. A comparison of hospitalization rate looks a lot like Philadelphia and St. Louis.

Hong Kong confirmed its first case of a traveler from Wuhan on Jan 23 (symptom onset of Jan 18). They would later learn of their first case of local transmission with symptom onset on Jan 22. On Jan 25, within 1 week of the symptom onset of the first case of a traveler and within 3 days of symptom onset of the first local case, they were already taking actions like suspending the reopening of schools—they were a bit lucky because the schools were closed for the Chinese New Year. So they took aggressive actions within 1 week of first recognized case. There was a lot of activity in Hong Kong in the first 3 weeks of January (large number of suspected cases that they were monitoring but they were only had syndromic surveillance since there were no diagnostics early on. So Hong Kong had been busy isolating scores of patients during the first 3 weeks of January based only on clinical presentation.

Singapore confirmed its first case on January 23 (traveler from Wuhan). The individual had symptom onset on Jan 20 on a flight to Singapore. On Feb 3, Singapore confirmed its first case of local transmission. Symptom onset for that individual was on Jan 29. On Feb 7, Singapore identified additional cases of local transmission and declared Code Orange and intensifies response. So Singapore takes aggressive action two weeks after confirmation of 1st case in a traveler and within 4 days of first case of local transmission.

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From: Carter Mecher

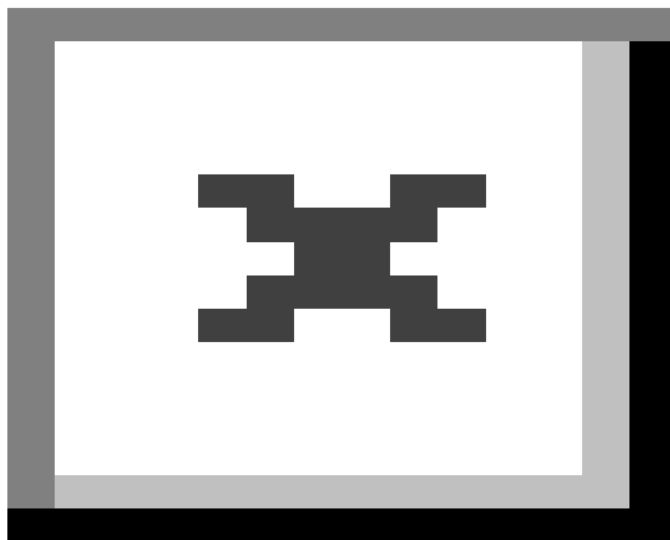
Sent: Sunday, March 1, 2020 5:58 AM

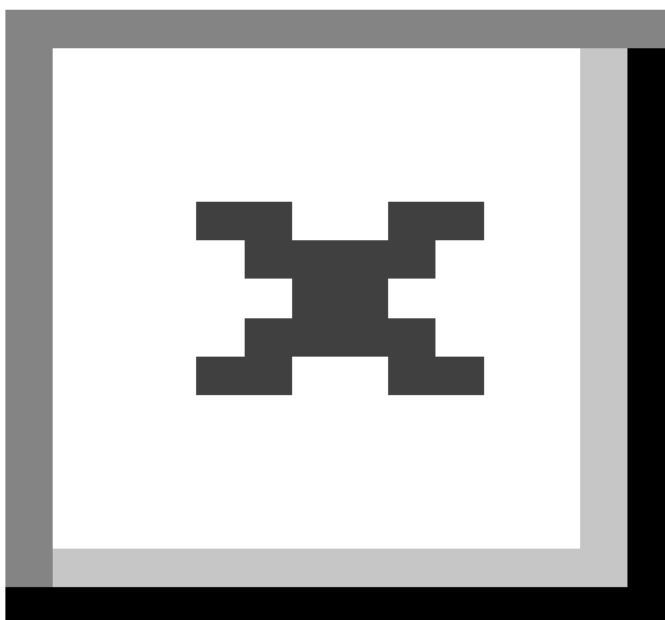
To: Caneva, Duane; Lawler, James V; Callahan, Michael V., M.D.; Dean, Charity A@CDPH

Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: RE: VA Projections using Cruise Ship Data

A few things for the group. Have been interested in whether we can see anything happening with flu surveillance (especially ILI) in places with COVID outbreaks, Am interested in looking at Japan, Hong Kong, Singapore, and Italy. So far, only found Hong Kong (Eva Lee found it). I will keep looking—really interested in South Korea and Italy to get a better sense of whether looking st ILI will be of any value. https://www.chp.gov.hk/files/pdf/fluexpress_week8_27_2_2020_eng.pdf [[chp.gov.hk](https://protect2.fireeye.com)] [protect2.fireeye.com] [protect2.fireeye.com] This is data thru Feb 22 (week 8). Hong Kong is really do a good job of surveillance. And what they are doing in terms of NPIs seems to be working (just like Singapore).





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From: [Caneva, Duane](#)

Sent: Saturday, February 29, 2020 11:18 PM

To: [Lawler, James V](#); [Carter Mecher](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: Re: VA Projections using Cruise Ship Data

+ Charity

CA seems first up.

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From: Lawler, James V (b)(6)@unmc.edu
Sent: Saturday, February 29, 2020 11:06:20 PM
To: Carter Mecher (b)(6)@charter.net; Callahan, Michael V., M.D. (b)(6)@mgh.harvard.edu
Cc: Marcozzi, David (b)(6)@som.umaryland.edu; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane (b)(6)@hq.dhs.gov; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert (b)(6)@me.com
Subject: Re: VA Projections using Cruise Ship Data

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Math looks good, Carter. And your calculations are enlightening. I had thought that hospital and ICU surveillance would be too late, but if you can do 100% surveillance on SARI in ICUs, then you might be able to act in time. Assume ICU is 1/5th of severe cases requiring hospitalization, then you are looking at roughly 12 cases per million. Let's assume 50% ascertainment rate for ICU, so when you detect 5-6 ICU COVID per million, you have hit your trigger. This assumes homogeneous distribution in communities, which is probably not true. So we may need to focus on certain segments (people from Chinatown in NY who are expected to have closer links to travelers from outbreak areas early) and have lower trigger – first 1-2 cases.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher (b)(6)@charter.net
Date: Saturday, February 29, 2020 at 6:53 PM
To: "Lawler, James V" (b)(6)@unmc.edu, "Callahan, m." (b)(6)@mgh.harvard.edu
Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" (b)(6)@hq.dhs.gov, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert (b)(6)@me.com
Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Something I have been thinking about wrt thresholds for NPIs. We usually think of the window for implementing NPIs as before 1% prevalence. But this disease has more than 50% asymptomatics, so the threshold is really 0.5% prevalence of any symptoms (including very mild symptoms). But CDC criteria for testing is severe disease. Let's say that 5% of those who are infected have severe disease, that means our threshold is 1%*5% = 0.05%. But it takes 2 weeks or so before a patient who is infected

becomes seriously ill. Over the span of 2 weeks plus the lag time for testing, the outbreak could have had at least 3 doublings (so an 8-fold increase). That may be conservative. So we are really talking about a threshold of close to $0.05\%/8 = 0.00625\%$. For a city of 1 M, that is 62 serious cases, 625 symptomatic, 1,250 infected. In 2 weeks, these numbers could be 500 serious, 5,000 symptomatic, 10,000 infected (the 1% threshold). Once you are there, the window is closed. If we assume a 3 week lag from infection onset to death, the number of deaths would be based on a denominator of 3 weeks ago, so divide 1,250 infected by roughly 3 (assume cases triple in a week), to get 400. Assume a CFR of 0.8%, so about 3 deaths. More than 3 deaths per million population is probably too late. Somebody could check my math.

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From: Lawler, James V

Sent: Saturday, February 29, 2020 5:31 PM

To: Callahan, Michael V., M.D.

Cc: Marcozzi, David; Carter Mecher; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Caneva, Duane; Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

Agree. We have set our d/c criteria for persons in isolation (documented infection) at improved sx's, afebrile x48 hrs (off antipyretics) and swab neg X3 24 hrs apart.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Callahan, m." <(b)(6)@mgh.harvard.edu>

Date: Saturday, February 29, 2020 at 2:39 PM

To: "Lawler, James V" <(b)(6)@unmc.edu>

Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Carter Mecher

<(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane"

<(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert <(b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Not great.....Better than poorly performed Induced sputum for AFB !

James, results from a 3rd Deep nasal swab could help us establish a viable protocol my 2 cents.

Michael Callahan MD MSPH DTM&H, DMCC (UK)

Director, Mass-Casualty Infection Operations

Vaccine & Immunotherapy Center

Massachusetts General Hospital

Boston, MA

Special Advisor to the Assistant Secretary of Public Health Preparedness and Response
U.S Dept of Health and Human Services
O'Neil Building 6th Floor
Washington, DC

On Feb 29, 2020, at 05:35, Lawler, James V <(b)(6)@unmc.edu> wrote:

External Email - Use Caution

NP x2 = 75% sensitivity, if my probability skilz are correct.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: "Marcozzi, David" <(b)(6)@som.umaryland.edu>
Date: Saturday, February 29, 2020 at 5:11 AM
To: "Lawler, James V" <(b)(6)@unmc.edu>, Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Wow, NP still misses 50%?

Can we assume this increase in magnitude (x2-3) for anyplace doing testing with NP? How much more sensitive with NP x2? That is what we do at Maryland.

Respectfully,

David Marcozzi, MD, MHS-CL, FACEP
Associate Professor
Associate Chair of Population Health
Department of Emergency Medicine
University of Maryland School of Medicine
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*Take time to deliberate; but when the time for action arrives, stop thinking and go in.
President Andrew Jackson*

From: James Lawler <(b)(6)@unmc.edu>
Date: Friday, February 28, 2020 at 19:57
To: Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, David Marcozzi <(b)(6)@som.umaryland.edu>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Duane Caneva <(b)(6)@hq.dhs.gov>, Robert Kadlec <Robert.Kadlec@hhs.gov>, "(b)(6)@mgh.harvard.edu" <(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Interestingly Japanese health folks only did OP swabs x1. NP swabs are much more sensitive. OP for us about half as sensitive (or less). NP already misses 50% with a single swab. So would probably multiply Japanese swab + by 2-3 to get true infection rate.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation

Global Center for Health Security, and
Associate Professor of Medicine
Division of Infectious Diseases
University of Nebraska Medical Center

m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher (b)(6)@charter.net
Sent: Friday, February 28, 2020 3:06:10 PM
To: Richard Hatchett <richard.hatchett@cepi.net>; Lawler, James V (b)(6)@unmc.edu;
Marcozzi, David (b)(6)@som.umaryland.edu; Hepburn, Matthew J CIV USARMY (USA)
<matthew.j.hepburn.civ@mail.mil>; Caneva, Duane (b)(6)@hq.dhs.gov; Kadlec, Robert
(OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Callahan, Michael V., M.D.
(b)(6)@mgh.harvard.edu; Tom Bossert (b)(6)@me.com
Subject: VA Projections using Cruise Ship Data

Non-UNMC email

I wanted to bounce this around the smaller group of wolverines. I also pulled the numbers of deaths annually in veterans and estimated deaths for all 19 M veterans using age specific death rates for males. The interesting thing is that the numbers of projected deaths related to COVID are actually pretty small compared to what we normally see for veterans. The challenge will be the amount of acute care—especially ICU care. The only chance that VA has is that we can knock down the attack rate thru TLC. The demand for acute care is overwhelming. The system would collapse under that level of demand.

Estimates of the impact of COVID on VA

In FY2019, VA cared for 6,271,019 unique veterans and had 9,237,638 veteran enrollees.

The Diamond Princess cruise ship outbreak can provide invaluable insights into the potential impact to VA.

Below is a comparison of the US population, the adult population aboard the cruise ship, and the Veteran population.

AGE	US Population 2017	% Distribution	Cruise Ship Passengers & Crew	% Distribution	FY2019 Veterans Vet Pop	% Distribution
20-29 years	45,489,095	19%	347	9%	932,473	5%
30-39 years	43,204,209	18%	428	12%	1,989,045	10%
40-49 years	40,617,231	17%	334	9%	2,194,505	11%
50-59 years	43,409,050	18%	398	11%	3,169,787	17%
60-69 years	36,824,083	15%	923	25%	3,735,399	19%
70-79 years	21,588,326	9%	1,015	27%	4,405,551	23%
>80 years	12,433,972	5%	227	6%	2,782,943	14%
Total population	243,565,966	100%	3,672	100%	19,209,704	100%

The Veteran population is similar to the Diamond Princess cruise ship population. If anything, the veteran population is even older (so at even higher risk). There were 3,711 passengers and crew aboard the crew ship (1,045 crew and 2,666 passengers). As of February 28, 2020, there have been 751 confirmed cases of COVID (attack rate of 20%). There have been 6 deaths thus far (lower limit of a case fatality rate of 0.80%). [A timeline of the outbreak is provided at the bottom of this message.] 380 of the confirmed cases were asymptomatic (50.6%). It is estimated that approximately 12-15% of the 751 passengers and crew with confirmed disease required acute care with 36 hospitalized patients reported to be in serious condition (5%). We looked at a range of ICU admissions (2%-5% of those who become infected).

Given the similarities of the demographics of the cruise ship and veterans, we could project the potential impact on veterans.

Veterans	Population FY2019	Total Infected (20% AR)	Number Asymptomatic (50.6%)	Hospitalizations 12%	ICU Admissions 2%	ICU Admissions 5%	Deaths CFR 0.80%
All Veterans	19,209,704	3,841,941	1,944,022	461,033	76,839	192,097	30,736
Veteran Enrollees	9,237,638	1,847,528	934,849	221,703	36,951	92,376	14,780
Veteran Uniques	6,271,019	1,254,204	634,627	150,504	25,084	62,710	10,034

Need to place these numbers into perspective.

Acute Inpatient Care	VHA Total
Operating Beds Hospital	15,744
Operating Beds Medicine/Surgery	9,817
Operating Beds ICU	1,692
ADC Hospital	9,805
ADC Medicine/Surgery	6,225
ADC ICU	1,101
ADC On a Ventilator	240
Daily Hospital Admissions	1,641
Daily Admissions Medicine/Surgery	1,226
Daily Admissions/Transfers in ICU	389
Emergency Department Care	
Daily ER Visits	6,874
Outpatient Care (non-ER)	
Daily Clinic Visits	209,336

The estimated number of deaths for all 19 M veterans is ~556,000. The number of annual deaths of veteran enrollees in FY2019 was 350,737. The projected number of COVID deaths for veterans is 14,780

The number of veterans who had an acute care hospitalization in FY2019 and died at any time during FY2019 was 62,375. The number of COVID deaths projected in veteran uniques (users) is 10,034.

Annually, VA has:

- 600,000 acute (medical/surgical) admissions
- 140,000 ICU admissions
- 2.5M ER/Urgent Care visits

If we assume that this outbreak will last approximately 3 months, we can then overlay the projected demand upon the usual background utilization over 3 months.

Even if we simply focus on the veteran uniques (veterans who used VA services and not enrollees), the numbers are a little overwhelming. We assumed that there might be 3 ER visits for each admission--so roughly 450,000 ER visits, 150,000 hospitalizations, and 25,000-63,000 ICU admissions.

Over an average 3-month period, VA would have ~625,000 ER/Urgent care visits, 150,000 acute care admissions, and 35,000 ICU admissions.

We assumed that acutely ill COVID patients will have long lengths of stay (14-21 days). If VA needs to absorb 150,000 hospitalizations (each with a LOS of 14-21 days), it would require 2.1 M to 3.2 M BDOCs.

If we assumed 14 day LOS for each ICU admission, 25,000-63,000 ICU admissions would equate to 350,000-882,000 ICU BDOCs.

The VA has 15,744 hospital operational beds (runs an ADC of only 9,805). Even if VA mobilized all those potential beds (15,744), for 3 months (90 days), we would generate the capacity for 1.4 M BDOCs.

Demand for care would exceed capacity by 700K BDOCs for a 14 day LOS and 1.7M BDOCs for a LOS of 21 days (1.5-2.2 times maximum capacity).

The VA has 1,692 ICU beds (runs an ADC of 1,101). Mobilizing all 1,692 ICU beds for 3 months (90 days), we would generate 152,000 BDOCs. Demand for ICU care would exceed capacity by 200,000-730,000 ICU BDOCs (2-5 times existing capacity).

This demand for care would not be constant across the 3 month period. The demand would rise exponentially, plateau, and then fall. The real concern is what will happen during the peak period of the epidemic.

VA does not have enough capacity to meet this demand, even if it mobilized every potential hospital bed to care for COVID patients (and there would be no capacity to care for usual demand for non-COVID acute care). And all this will be happening with a VA workforce that will be significantly diminished due to illness, home isolation, home quarantine and childminding responsibilities related to closure of schools and daycare, and fear.

Timeline of Diamond Princess cruise ship outbreak

Date	Event	Cumulative Number of Confirmed Cases	Cumulative Number of Deaths	Note
20-Jan	Cruise ship departs from Yokohama Japan			
25-Jan	80 year old passenger disembarks in Hong Kong			

1-Feb	80 year old passenger confirmed to have COVID-19			
	When results known, certificate of landing canceled and ship under quarantine. Tests for the virus would be administered to three groups: those with symptoms, those who got off in Hong Kong, and those who had close contact with the infected passenger.			
3-Feb	Ship arrives in port of Yokohama Japan			
5-Feb	10 passengers and crew confirmed +	10		
6-Feb	31 more passengers and crew confirmed +	41		
7-Feb	30 more passenger and crew confirmed +	61		
8-Feb	9 more passenger and crew confirmed +	70		
10-Feb	66 more passenger and crew confirmed +	136		439 tes
11-Feb	39 more passenger and crew confirmed +	175		492 tes
12-Feb	28 more passenger and crew confirmed +	203		4 in IC
13-Feb	15 more passenger and crew confirmed +	218		713 tes
14-Feb	67 more passenger and crew confirmed +	285		927 tes
15-Feb	70 more passenger and crew confirmed +	355		1,211 tested; asymptomatic
16-Feb	329 American evacuated from cruise ship (14 of the evacuees found to be +) 61 Americans remained on board 44 Americans remained hospitalized in Japan	369		
17-Feb	85 more passenger and crew confirmed +	454		1,721 tested; serious
18-Feb	167 more passenger and crew confirmed +	621		3,011 te
19-Feb	2 deaths	621	2	
20-Feb	13 more passenger and crew confirmed +	634	2	3,061 tested; seriously ill asymptomatic
23-Feb	Death reported in Japan		3	
24-Feb	Japan updates total to 691; US reports 36 in US	691	3	
25-Feb	Death reported in Japan; US reports 40 in US; UK 4; Australia 7; Hong Kong 4; Israel 2; Total 744; plus 4 not on ship	734	4	3,891 tested; seriously ill asymptomatic

26-Feb	US reports total of 42 cases in US; Japan announces that 45 of 813 former passengers have symptoms and will need to be tested; 14 new cases confirmed in the Diamond Princess cruise ship, raising the total to 705 cases inside the ship	750	4	
27-Feb	Australia (+1) 8 cases (repatriated)	751	4	
28-Feb	2 death reported in Japan	751	6	

As a check on deaths, I applied the age specific death rates per 100,000 population for the entire veteran population of 19M (90% male)

AGE	2019 VetPop	2017 Male All Cause Mortality per 100,000	Estimated 2017 All Cause Deaths
20 to 24 years	262,415	137.9	362
25 to 29 years	670,058	171.3	1,148
30 to 34 years	933,598	196.3	1,833
35 to 39 years	1,055,447	227.1	2,397
40 to 44 years	1,004,755	273.6	2,749
45 to 49 years	1,189,750	387.3	4,608
50 to 54 years	1,457,440	604.4	8,809
55 to 59 years	1,712,347	919.5	15,745
60 to 64 years	1,867,136	1,328.3	24,801
65 to 69 years	1,868,263	1,831.8	34,223
70 to 74 years	2,703,684	2,668.0	72,134
75 to 79 years	1,701,867	4,193.7	71,371
80 to 84 years	1,187,331	6,901.6	81,945
85 years and over	1,595,611	14,689.2	234,383
Total population	19,209,704	863.8	556,507

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Sent Date:	2020/03/01 13:15:11
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From:	POLITICO Pro Health Care <politicoemail@politicopro.com>
To:	AMA2 (OS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c145629cc8ac4858bf1f0ce5dd0461dc-AMA2!>
Subject:	UPDATED: Pence warns that more coronavirus cases are coming
Date:	2020/03/01 13:37:13
Priority:	Normal
Type:	Note

UPDATED: Pence warns that more coronavirus cases are coming

By Dan Goldberg

03/01/2020 10:32 AM EST

Vice President Mike Pence on Sunday sought to reassure the public that the government is taking steps to slow the spread of coronavirus as new cases were reported in an Illinois health worker, a Rhode Island tourist and two Washington state men in their 60s. Authorities were also investigating possible wider spread in Washington state after the first recorded U.S. death there.

“The reality ... is that for most people that contract the coronavirus, they will recover,” Pence said on CNN’s “State of the Union.” “But for people that have other conditions, that would militate toward a worse outcome, that we could have more sad news.”

Pence and HHS Secretary Alex Azar made the rounds of the Sunday morning shows, while top government health experts had no television appearances scheduled. Both said the pace of testing is being stepped up. Efforts to do broader surveillance of the population had been slowed by earlier problems with the lab test developed by the Centers for Disease Control and Prevention.

Pence, whom President Donald Trump tapped to lead the response to the outbreak, said the risk of contracting the virus in the United States remains low and that 15,000 testing kits are “in the mail” on their way to state and local health officials. The vice president added that the government is working with a private contractor to distribute an additional 50,000 testing kits.

Subsequent information suggested Pence confused “kits” — each of which includes many individual tests — with the capacity to do tests, overstating the number of kits. The Association of Public Health Laboratories told POLITICO it understands there will be enough kits to test 75,000 patients by the end of the week.

Former FDA Commissioner Scott Gottlieb said on CBS’ “Face the Nation” that by the end of the week, 10,000 people per day will be able to be screened. By the end of the following week, the capacity could double to 20,000 per day.

The reassurances come the day after the White House announced that a Washington state man in his late 50s died from the virus. Both Trump and Pence initially referred to the patient as a

woman, a mixup blamed on miscommunication from the CDC.

Illinois officials late Saturday reported a third positive test for the virus. The previous two patients made a full recovery, according to a statement from the state health department. On Sunday morning, Rhode Island officials announced the state's first positive test, a person in their mid-40s who had traveled to Italy in mid-February. That person did not return to work, state health officials said, and the person's family is self-quarantining.

King County in Washington on Sunday afternoon reported two more positive cases, bringing the total in the county to six. A man in his 60s with underlying health conditions is hospitalized in critical condition. A second man in his 60s is also hospitalized and in critical but stable condition.

Meanwhile, Washington state officials and the CDC were assessing a potential outbreak at a long-term care facility after 27 patients and 25 staff were found to have possible symptoms of the coronavirus. A health care worker and a resident of the facility have tested positive, state officials said Saturday. The man who died had no known association with the facility.

"We've always believed, and we've said publicly from day one that we would see more cases, that we would see spreading here in the United States," Azar said on ABC's "This Week." "And this is exactly what we've been predicting all along. We are deployed out there with the state of Washington and local authorities."

The CDC has confirmed 22 cases in the U.S. so far, including at least four in which people were infected without traveling to an affected country or coming into contact with anyone known to have the disease.

Pence said four patients remain in serious condition.

More positive test results are expected now that the FDA is allowing local health labs to use coronavirus tests they developed.

"If someone comes to a local hospital and complains of a respiratory illness, we're not just testing them for the flu, we're also testing them, in more cases now, for coronavirus," Pence said on NBC's "Meet The Press." "And that's how several of the cases that came to light at the end of this week came to our attention."

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To:	Harrison, Brian (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d145efc9c35c4865aca6e9d47786b204-Harrison, B>
Subject:	UPDATED: Pence warns that more coronavirus cases are coming
Date:	2020/03/01 13:38:35
Priority:	Normal
Type:	Note

UPDATED: Pence warns that more coronavirus cases are coming

By Dan Goldberg

03/01/2020 10:32 AM EST

Vice President Mike Pence on Sunday sought to reassure the public that the government is taking steps to slow the spread of coronavirus as new cases were reported in an Illinois health worker, a Rhode Island tourist and two Washington state men in their 60s. Authorities were also investigating possible wider spread in Washington state after the first recorded U.S. death there.

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Sent Date:	2020/03/01 13:38:06
Delivered Date:	2020/03/01 13:38:35

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Subject:	AMA Coronavirus update
Date:	2020/03/01 15:23:06
Start Date:	2020/03/01 15:30:00
End Date:	2020/03/01 15:45:00
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Location:	CALL //(b)(6)
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(b)(6)

Briefing Agenda:

1. Epi Update (CDC)
2. Supplies (ASPR/FDA)
 - a. PPE
 - b. Masks
 - c. Supply Chain
3. Lab in Atlanta (FDA)
4. Governors VTC Tomorrow

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Sent Date:	2020/03/01 14:34:45
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Subject:	AMA Coronavirus update
Date:	2020/03/01 15:16:41
Start Date:	2020/03/01 15:30:00
End Date:	2020/03/01 15:45:00
Priority:	Normal
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Delivered Date:	2020/03/01 15:16:41

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To:	AMA2 (OS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c145629cc8ac4858bf1f0ce5dd0461dc-AMA2!>; Apple, Matthew (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b2d31099399446eab9bfff69d52880932-Apple, Matt>; Callaghan-Arguelles, Christine (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4bbf06e781f3484298bb58527900feac-Callaghan-A>; Harrison, Brian (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d145efc9c35c4865aca6e9d47786b204-Harrison, B>; Mango, Paul (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1d8863b643654b1aad9a38c952af613e-Mango, Paul>; Puesan, Cesar (HHS/OS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1704b662180d4631b7b64cb17de301cd-Puesan Juar>; Stecker, Judy (OS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0280b227911b40b6b30a81b8574ede6b-Stecker, Ju>; Tignor, Beth (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=464729cc8a584516adddbc50d76a94a8-Tignor, Bet>; Ford-Barnes, Arwenithia (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d533abc24cbe44b79f6fddc6b08737a6-Ford-Barnes>; Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Redfield, Robert R. (CDC/OD) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9ab74a26317547b8a754285d9eaa847c-robert.redf>; Williams, Teresa (CDC/OD/OCS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d75dfdae7a1c43dabdf96bad6f8b33cf-Williams, T>; Gershman, Lynn E. (CDC/DDPHSIS/OD) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=217e953c4c9c4d17b257f97e95b9c7fd-lynn.gershm>; Conrad, Patricia (NIH/NIAID) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3793ae43a1744d8f8aa56b600c0c975b-patricia.co>; Fauci, Anthony (NIH/NIAID) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=826965b24a314ffca7eddc6e8229aa7-anthony.fau>; Adams, Jerome (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=184fe51f7350400b8a99dabd65ac0db5-Adams, Jero>; Stephen Hahn (sh1@fda.hhs.gov) <sh1@fda.hhs.gov>; Sheehy, Janice (FDA/ORA) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fb7cf0dc2efd4b298e689239b944f23c-janice.shee>; Grigsby, Garrett (HHS/OS/OGA) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7cd78b4810d44b17b8711aaede9a9023-Grigsby, Gl>; Zebley, Kyle (HHS/OS/OGA) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b81a0e4749994f969ff1063b9a3a0b1f-Zebley, Kyl>; Murphy, Ryan (OS/ASPA) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=314e69c69a844b47bdd9f74bc60a8d44-Murphy, Rya>; Hall, Bill (HHS/ASPA) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=02b39f27f3b4469a960054b23545cc24-Hall, Bill>
Subject:	AMA Coronavirus update
Date:	2020/03/01 14:34:48
Start Date:	2020/03/01 15:30:00
End Date:	2020/03/01 15:45:00
Priority:	Normal
Type:	Schedule.Meeting.Request
Location:	CALL //(b)(6)
Attendees:	AMA2 (OS/IOS); Apple, Matthew (HHS/IOS); Callaghan-Arguelles, Christine (HHS/IOS); Harrison, Brian (HHS/IOS); Paul Mango ; Puesan, Cesar (HHS/OS/IOS); Stecker, Judy (OS/IOS); Tignor, Beth (HHS/IOS); Ford-Barnes, Arwenithia (OS/ASPR/IO); Kadlec, Robert (OS/ASPR/IO) (Robert.Kadlec@hhs.gov); Robert R. Redfield (CDC/OD) (olx1@cdc.gov); Williams, Teresa (CDC/OD/OCS); Gershman, Lynn E. (CDC/DDPHSIS/OD); Conrad, Patricia (NIH/NIAID) [E]; Fauci, Anthony (NIH/NIAID) [E]; Adams, Jerome (HHS/OASH); Stephen Hahn (sh1@fda.hhs.gov); Sheehy, Janice (FDA/ORA); Garrett Grigsby (HHS/OS/OGA) (Garrett.Grigsby@hhs.gov); Kyle Zebley (HHS/OS/OGA) (Kyle.Zebley@hhs.gov); Ryan Murphy (OS/ASPA) (Ryan.Murphy1@hhs.gov); Hall, Bill (HHS/ASPA)

(b)(6)

Briefing Agenda:

1. Epi Update (CDC)
2. Supplies (ASPR/FDA)
 - a. PPE
 - b. Masks
 - c. Supply Chain
3. Lab in Atlanta (FDA)
4. Governors VTC Tomorrow

Sender:	Secretary Scheduler (OS/IOS) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=6801B3307D554C04B245714132602E16-SECRETARY S>
Recipient:	AMA2 (OS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c145629cc8ac4858bf1f0ce5dd0461dc-AMA2!>; Apple, Matthew (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b2d31099399446eab9bfff69d52880932-Apple, Matt>; Callaghan-Arguelles, Christine (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4bbf06e781f3484298bb58527900feac-Callaghan-A>; Harrison, Brian (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d145efc9c35c4865aca6e9d47786b204-Harrison, B>; Mango, Paul (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1d8863b643654b1aad9a38c952af613e-Mango, Paul>; Puesan, Cesar (HHS/OS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1704b662180d4631b7b64cb17de301cd-Puesan Juar>; Stecker, Judy (OS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0280b227911b40b6b30a81b8574ede6b-Stecker, Ju>; Tignor, Beth (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=464729cc8a584516adddbbc50d76a94a8-Tignor, Bet>; Ford-Barnes, Arwenitha (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d533abc24cbe44b79f6fddc6b08737a6-Ford-Barnes>; Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Redfield, Robert R. (CDC/OD) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9ab74a26317547b8a754285d9eaa847c-robert.redf>; Williams, Teresa (CDC/OD/OCS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d75dfdae7a1c43dabdf96bad6f8b33cf-Williams, T>; Gershman, Lynn E. (CDC/DDPHSIS/OD) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=217e953c4c9c4d17b257f97e95b9c7fd-lynn.gershm>; Conrad, Patricia (NIH/NIAID) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3793ae43a1744d8f8aa56b600c0c975b-patricia.co>; Fauci, Anthony (NIH/NIAID) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=826965b24a314ffca7eddc6b6e8229aa7-anthony.fau>; Adams, Jerome (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=184fe51f7350400b8a99dabd65ac0db5-Adams, Jero>; Stephen Hahn (sh1@fda.hhs.gov) <sh1@fda.hhs.gov>; Sheehy, Janice (FDA/ORA) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fb7cf0dc2efd4b298e689239b944f23c-janice.shee>; Grigsby, Garrett (HHS/OS/OGA) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7cd78b4810d44b17b8711aaede9a9023-Grigsby, Gl>; Zebley, Kyle (HHS/OS/OGA) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b81a0e4749994f969ff1063b9a3a0b1f-Zebley, Kyl>; Murphy, Ryan (OS/ASPA) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=314e69c69a844b47bdd9f74bc60a8d44-Murphy, Rya>; Hall, Bill (HHS/ASPA) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=02b39f27f3b4469a960054b23545cc24-Hall, Bill>
Sent Date:	2020/03/01 14:34:45
Delivered Date:	2020/03/01 14:34:48

From:	Collins, Francis (NIH/OD) [E] <(b)(6)@od.nih.gov>
To:	ASPR Healthcare System Resilience Task Force (OS/ASPR/EMMO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4c1010b9282944d7a00ae70f23a4b6ae-ASPRHealthc>
CC:	Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Fauci, Anthony (NIH/NIAID) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=826965b24a314ffca7eddc6e8229aa7-anthony.fau>; Tabak, Lawrence (NIH/OD) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=197374c4f1864f8e97f24f1d96aeb765-lawrence.ta>; Marston, Hilary (NIH/NIAID) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=93be476c17024bbcbc5b44add01fe6a8-hilary.mars>; Allen-Gifford, Patrice (NIH/OD) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=803ed4e77c17499e9ad51fc86b512f9a-patrice.all>
Subject:	NIH participation in HCSRTF for COVID-19
Date:	2020/03/01 15:24:04
Priority:	Normal
Type:	Note

Here is the NIH response to Bob Kadlec's request from 2/28.

Francis Collins

(b)(5)

(b)(5)

(b)(5)

Sender:	Collins, Francis (NIH/OD) [E] <(b)(6)@od.nih.gov>
Recipient:	ASPR Healthcare System Resilience Task Force (OS/ASPR/EMMO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4c1010b9282944d7a00ae70f23a4b6ae-ASPRHealthc>; Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Fauci, Anthony (NIH/NIAID) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=826965b24a314ffca7eddc6e8229aa7-anthony.fau>; Tabak, Lawrence (NIH/OD) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=197374c4f1864f8e97f24f1d96aeb765-lawrence.ta>; Marston, Hilary (NIH/NIAID) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=93be476c17024bbcb5b44add01fe6a8-hilary.mars>; Allen-Gifford, Patrice (NIH/OD) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=803ed4e77c17499e9ad51fc86b512f9a-patrice.all>
Sent Date:	2020/03/01 15:23:57
Delivered Date:	2020/03/01 15:24:04

From:	Grigsby, Garrett (HHS/OS/OGA) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=7CD78B4810D44B17B8711AAEDE9A9023-GRIGSBY, GL>
To:	Harrison, Brian (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d145efc9c35c4865aca6e9d47786b204-Harrison, B>
CC:	Stecker, Judy (OS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0280b227911b40b6b30a81b8574ede6b-Stecker, Ju>; Mango, Paul (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1d8863b643654b1aad9a38c952af613e-Mango, Paul>; Zebley, Kyle (HHS/OS/OGA) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b81a0e4749994f969ff1063b9a3a0b1f-Zebley, Kyl>
Subject:	FW: (FOUO) Assessment of WHO Mission Report compared to HHS Requirements for a Successful WHO Mission
Date:	2020/03/01 15:51:50
Priority:	Normal
Type:	Note

Brian,

I gave the Sec the full report Fri at the G7 call. Over the weekend, Larry Kerr went through it and created a 2-pager (1st doc) listing: (1) answered/unanswered epidemiology questions; (2) answered/unanswered mitigation measures questions; (3) over-arching observations/issues with the *Report*; (4) specific technical observations about the *Report*; and (5) some new data from the *Report*.

I know the Secretary already has too much on his plate, but given he has the 40 page report, this might be helpful if albeit somewhat technical – I know he has the appetite for that...

Thanks!

From: Kerr, Lawrence (HHS/OS/OGA) <Lawrence.Kerr@hhs.gov>
Sent: Saturday, February 29, 2020 9:33 PM
To: Grigsby, Garrett (HHS/OS/OGA) <Garrett.Grigsby@hhs.gov>; Zebley, Kyle (HHS/OS/OGA) <Kyle.Zebley@hhs.gov>
Cc: Elvander, Erika (OS/OGA) <Erika.Elvander@hhs.gov>; Fernandez, Jose (OS/OGA) <Jose.Fernandez@hhs.gov>; Kibunja, Julia (OS/OGA) <Julia.Kibunja@hhs.gov>; Weinberger, Collin (OS/OGA) <Collin.Weinberger@hhs.gov>
Subject: (FOUO) Assessment of WHO Mission Report compared to HHS Requirements for a Successful WHO Mission

Garrett,

Please find my review of the WHO Mission Report and in the attachment, and assessment of whether the requirements that HHS set for a successful mission have been answered by the Report (green indicating that the requirement was addressed; red designating not addressed). Also is my marked up version of the report, highlighting some oddities and/or new information that has not been released before.

Happy to answer any questions,

Larry

Summary:

(b)(5)

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Sender:	Grigsby, Garrett (HHS/OS/OGA) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=7CD78B4810D44B17B8711AAEDE9A9023-GRIGSBY, GL>
Recipient:	Harrison, Brian (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d145efc9c35c4865aca6e9d47786b204-Harrison, B>; Stecker, Judy (OS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0280b227911b40b6b30a81b8574ede6b-Stecker, Ju>; Mango, Paul (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1d8863b643654b1aad9a38c952af613e-Mango, Paul>; Zebley, Kyle (HHS/OS/OGA) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b81a0e4749994f969ff1063b9a3a0b1f-Zebley, Kyl>
Sent Date:	2020/03/01 15:51:31
Delivered Date:	2020/03/01 15:51:50
Message Flags:	Unread

From:	OS Secretarys Operations Center </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=32B1F28D808B43B6903C00083291303E-SECRETARYS>
To:	OS Secretarys Operations Center </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=32b1f28d808b43b6903c00083291303e-Secretarys>
Subject:	COVID-19 Open Media Report 01Mar20
Date:	2020/03/01 15:59:33
Priority:	Normal
Type:	Note

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Good afternoon all,

Attached is the 01Mar20 COVID-19 Open Media Report.

BLUF: COVID-19 continues to spread to different countries especially in Europe. News media is reporting up to 71 cases in the U.S. There are 50 people in the state of Washington who are being monitored for COVID-19. Rumors on social media are affecting business and creating fear in the public.

Epidemiology: Official case counts are distributed via the COVID-19 Morning CDC Updates and COVID-19 SLBs.

- Traditional news media reports over 87,000 cases globally, and more than 3,000 worldwide deaths. The vast majority of cases remains in mainland China. There were also significant increases in cases in South Korea, Italy, and Iran.
- Nigerian health officials have contacted over 100 people and asked them to self-isolate because they had contact with an Italian man who has tested positive for COVID-19.
- Rhode Island reported its first case of COVID-19. A person in their 40s returned back from Italy in mid-FEB. Outreach to other people who may have been in contact with the case are being contacted.
- The Dominican Republic and France reported the first confirmed COVID-19 case in the Caribbean. An Italian who came to the country on 22Feb20 is being treated in isolation on a military base, but has not shown symptoms.

Public Health/Clinical Response:

- The Governor of Washington declared a state of emergency after a man died of COVID-19 on Saturday 29 FEB2020. More than 50 people in a nursing facility are sick and need to be tested for the virus.

Public Sentiment

- In Europe social greetings like kissing on the cheek and shaking hands are being discouraged to help prevent the spread of the virus, especially for health care workers.

Please see the attached Open Media Report for additional information. *This message was distributed to the 2019 nCoV Distribution Lists.*

Prepared by:

Secretary's Operations Center

U.S. Department of Health and Human Services (HHS)
Assistant Secretary for Preparedness and Response (ASPR)
200 Independence Ave. S.W.
Washington D.C. 20201
Office (202) 619-7800
Fax: 800-514-4256
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cid:image001.png@01D5E9B2.F84B1BA0

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Sent Date:	2020/03/01 15:59:25
Delivered Date:	2020/03/01 15:59:33
Message Flags:	Unread

From:	Carter Mecher <(b)(6)@charter.net>
To:	Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Lawler, James V <(b)(6)@unmc.edu>; Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.roup (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>
CC:	Caneva, Duane (DHS.GOV) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b6ba3c00c7944e1b99ed3eecab996186-Duane.Canev>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>; Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject:	RE: VA Projections using Cruise Ship Data
Date:	2020/03/01 16:01:53
Priority:	Normal
Type:	Note

Seattle now has 1 death and 2 patients in critical condition. Are they planning on taking any actions? NPIs?

I think we have more than hundreds of cases in the community (would add another zero). This is what Italy felt like.

Sent from [Mail](#) for Windows 10

From: [Callahan, Michael V., M.D.](#)
Sent: Sunday, March 1, 2020 12:31 PM
To: [Lawler, James V](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Carter Mecher](#); [Callahan, Michael V., M.D.](#)
Cc: [Caneva, Duane \(DHS.GOV\)](#); [Dean, Charity A@CDPH](#); [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Tom Bossert](#)
Subject: Re: VA Projections using Cruise Ship Data

We briefed this at ASPR. There are slides from HK MOH shared with BARDA regarding where to put MCM investments (NPI, vs. vaccine vs biologics).

In that data, HK MOH and Guam Le, of SARS fame, reported the following for only Jan 1 - Feb 1:

1. • Current A/influenza and lower levels of B/influenza-as shown by respiratory viral panel and rapid A/flu tests did not deviate from influenza reporting seen in Guangdong or Nanjing and were slightly **higher** than 2018-19 transmission season
2. • COVID19 levels rose steadily during the Jan 15-Feb 1 date. These cases were **additive** to to MGH partner hospitals: Queen Mary, Hong Kong Adventists, Baptist and Gleneagle hospitals. The numbers do not include co-infection with flu, and do not include secondary risk factors (age, CKI, COPD, Diabetes or use of DMARDS/biologics_)

3. • Hong Kong is a great model for US, as bed count is close to CONUS Cities, demographics include significant middle income demographics and a community sector that is avoidant of central authority (Beijing).

Summary from that data: C19 appears to be additive to burden of ILI in HK, that these cases did not look at coinfection (and thus might be overstating severity).

I would suggest we **re-convene** the webex with **Guam Li**/HK MOH so we do not have to wait for the Feb 29 data. It would be most helpful to have others on this threat also hear this information.

This can be done under MITRE, RM, MGH or under the ASPR.

Added point: Hong Kong MOH was important at notifying friendly nations (Singapore, Canada) of inbound travelers from region who transitted via HKG (HK Intl. Airport) enroute to other sites. This information was not shared with CDC .

From: Lawler, James V <(b)(6)@unmc.edu>
Sent: Sunday, March 1, 2020 12:09 PM
To: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Carter Mecher <(b)(6)@charter.net>
Cc: Caneva, Duane (DHS.GOV) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>; Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

External Email - Use Caution

Interesting question. I think that flu is on downturn by itself. The more dramatic differential in week 8 could reflect –

1. • Normal variation that occurs outside peak flu times, that lots of other resp viruses circulate
2. • COVID predominance in ILI now that it is taking off and flu is on decline.

Given the ILI rate now double what lab confirmed flu %positive rate, that seems like a significant change.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>
Date: Sunday, March 1, 2020 at 11:03 AM
To: Carter Mecher <(b)(6)@charter.net>
Cc: "Lawler, James V" <(b)(6)@unmc.edu>, "Caneva, Duane (DHS.GOV)" <(b)(6)@hq.dhs.gov>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <charity.dean@cdph.ca.gov>, "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Is it your judgement that COVID is pushingcrowding Influenza out?

Sent from my iPhone

On Mar 1, 2020, at 10:08 AM, Carter Mecher <(b)(6)@charter.net>wrote:

Was able to find South Korea flu surveillance.

<https://www.cdc.go.kr/board/board.es?mid=a30504000000&bid=0033> [cdc.go.kr]

I pulled the data for weeks 49-8 (it doesn't look like ILI is much help).

Week	ILI Rate	%Positive Samples for Influenza
49	19.5%	18.6%
50	28.5%	16.2%
51	37.8%	25.9%
52	49.8%	35.1%
1	49.1%	43.4%
2	47.8%	40.6%
3	42.4%	37.6%
4	40.9%	43.4%
5	28.0%	40.9%
6	16.4%	16.7%
7	11.6%	15.8%
8	8.5%	3.9%

<6ECD810E8CEE448097E96CCC06727521.png>

Sent from Mail [protect2.fireeye.com] for Windows 10

From: Lawler, James V
Sent: Sunday, March 1, 2020 8:43 AM

To: Kadlec, Robert (OS/ASPR/IO); Carter Mecher; Caneva, Duane (DHS.GOV); Callahan, Michael V., M.D.; Dean, Charity A@CDPH
Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Tom Bossert
Subject: Re: VA Projections using Cruise Ship Data

As Carter points out, Wuhan and other cities started way too late.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation
Global Center for Health Security, and
Associate Professor of Medicine
Division of Infectious Diseases
University of Nebraska Medical Center
m. (b)(6)
(b)(6)@unmc.edu

<8652377C655D4CE6946BE0A9C3B0144B.png>

From: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>

Sent: Sunday, March 1, 2020 7:25:22 AM

To: Carter Mecher <(b)(6)@charter.net>; Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV [dhs.gov]) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>

Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Here is something to ponder from the China CDC report from a couple of days ago.

“A main finding of this characterization and exploratory analysis of the first 72,314 cases of COVID-19 found in China in the 40 days between first recognition of the outbreak of pneumonia with unknown etiology on December 31, 2019 to the end of the study period on February 11, 2020 is that this novel coronavirus is highly contagious. It has spread extremely rapidly from a single city to the entire country within only about 30 days. Moreover, it has achieved such far-reaching effects even in the face of extreme response measures including the complete shutdown and isolation of whole cities, cancellation of Chinese New Year celebrations, prohibition of attendance at school and work, massive mobilization of health and public health personnel as well as military medical units, and rapid construction of entire hospitals.”

From: Carter Mecher <(b)(6)@charter.net>
Sent: Sunday, March 1, 2020 7:58 AM
To: Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV [dhs.gov]) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>
Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

James said something to me that I do want to frame on the good wall (not the bad wall of understatements).

He gave a presentation to education leaders and I'm paraphrasing: With pandemic flu we would close the schools to protect the kids and reduce community transmission. With COVID we would close the schools (not so much to protect the kids), but to reduce community transmission and protect their grandparents.

James can phrase it better than I can—but that is the message. Tom are you listening?

Sent from Mail [protect2.fireeye.com] [protect2.fireeye.com] for Windows 10

From: Lawler, James V
Sent: Sunday, March 1, 2020 7:41 AM
To: Carter Mecher; Caneva, Duane; Callahan, Michael V., M.D.; Dean, Charity A@CDPH
Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Kadlec, Robert (OS/ASPR/IO); Tom Bossert
Subject: Re: VA Projections using Cruise Ship Data

Listening to CNN "experts" this morning. They have no clue what they are talking about – saying that young people really shouldn't worry and older/vulnerable folks are the only ones that should be changing behavior. No concept that our elders are depending on the actions of the entire community and also that once the healthcare system collapses, all of the services for which younger folks access that system will be gone as well. We have to get out in front of messaging.

James Lawler, MD, MPH, FIDSA

m:(b)(6)
(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>
Date: Sunday, March 1, 2020 at 6:20 AM
To: "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Lawler, James V" <(b)(6)@unmc.edu>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <charity.dean@cdph.ca.gov>
Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Richard Hatchett

<richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)"
<matthew.j.hepburn.civ@mail.mil>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>,
Tom Bossert (b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Also have been thinking more about thresholds for pulling triggers.

I thought a but more about what James said about true prevalence—that it would be at least twice as high as we currently think it is on the cruise ship. That would mean that true attack rate is closer to 40%, 80% of cases are asymptomatic, 6% of cases are hospitalized, 1% are critical (in ICU), and CFR is about 0.5%. But given the demographics of the cruise ship we are really the diluting effect of kids and young adults. They would be expected to have high attack rates and even higher rates of asymptomatic disease and mild disease (pushing up the % asymptomatics, reducing the overall hospitalization rate, ICU rate and CFR). So wanted to play with those estimates of thresholds again (will resend updated math).

Yesterday I was at my daughter's house helping them pull out vines that were planted as ground cover. The damn things grow everywhere, climbing up trees and smothering them (this isn't kudzu). My wife said something about these vines that made me think of what we are seeing in South Korea, Italy and now the US. When you plant these vines, they go thru 3 stages—sleep, creep, and leap. First year they don't seem to be doing much—they sleep (but they are laying down a root system that you cannot see). The next year they creep (seeing some spread above ground while the root system hidden from view continues to spread). And the next year they leap (the vines seem to explode everywhere you look).

That is exactly what Italy feels like (but speeded up). We are blind to what is "happening underground." The root system is really those dendrite transmission trees that Richard likes. I pulled out the Singapore graphic again of their contact tracing of cases (that is the root system). They have given up continuing to update that graphic and only providing linkages between cases when they provide brief summaries of individual cases. Probably getting to complex to show.

<image001.png>

In the US we just pulled up three random roots that are far from any plants we can see above the surface. My concern is that we are at the cusp of "leap" and cases are going to start popping like popcorn wherever we look.

This gets to the timing of NPIs

I went back to the Philadelphia-St Louis comparison of 1918. The difference between Philadelphia and St. Louis in 1918 in terms when they pulled the trigger on NPIs was about two weeks during the course of their individual outbreaks. In St. Louis, NPIs were put in place 1 week after the first cases at Jefferson Barracks, 5 days after the first death, and 3 days after the first civilian cases in St. Louis. In Philadelphia, NPIs were put in place 3 weeks after the first cases at the Navy Yard, 16 days after the first civilian cases in Philadelphia, 2 weeks after the first death.

We would estimate that the outbreak in Wuhan had about a 2 week head start on the rest of Hubei. So the measures China implemented to slow transmission happened about two later in the course of the

outbreak in Wuhan compared to the rest of Hubei Province. A comparison of hospitalization rate looks a lot like Philadelphia and St. Louis.

Hong Kong confirmed its first case of a traveler from Wuhan on Jan 23 (symptom onset of Jan 18). They would later learn of their first case of local transmission with symptom onset on Jan 22. On Jan 25, within 1 week of the symptom onset of the first case of a traveler and within 3 days of symptom onset of the first local case, they were already taking actions like suspending the reopening of schools—they were a bit lucky because the schools were closed for the Chinese New Year. So they took aggressive actions within 1 week of first recognized case. There was a lot of activity in Hong Kong in the first 3 weeks of January (large number of suspected cases that they were monitoring but they were only had syndromic surveillance since there were no diagnostics early on. So Hong Kong had been busy isolating scores of patients during the first 3 weeks of January based only on clinical presentation.

Singapore confirmed its first case on January 23 (traveler from Wuhan). The individual had symptom onset on Jan 20 on a flight to Singapore. On Feb 3, Singapore confirmed its first case of local transmission. Symptom onset for that individual was on Jan 29. On Feb 7, Singapore identified additional cases of local transmission and declared Code Orange and intensifies response. So Singapore takes aggressive action two weeks after confirmation of 1st case in a traveler and within 4 days of first case of local transmission.

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From: [Carter Mecher](#)

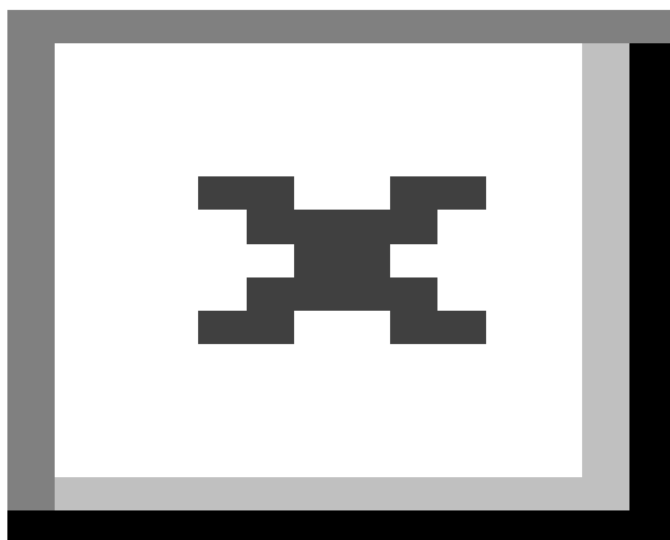
Sent: Sunday, March 1, 2020 5:58 AM

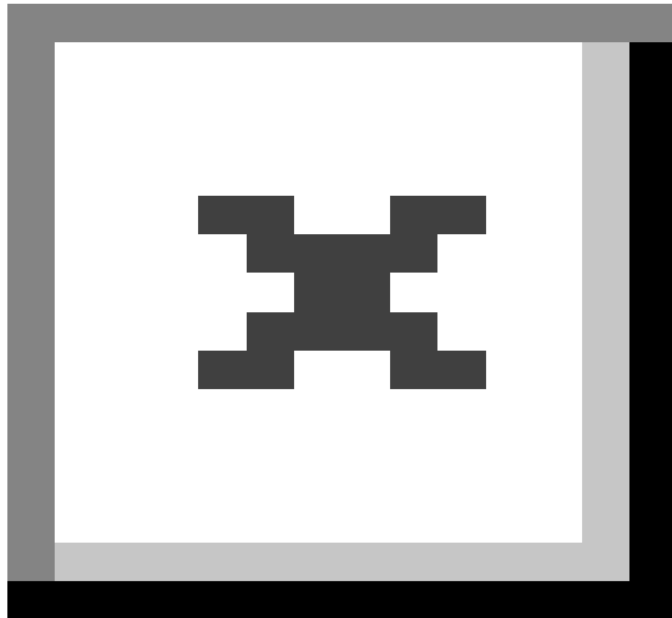
To: [Caneva, Duane](#); [Lawler, James V](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: RE: VA Projections using Cruise Ship Data

A few things for the group. Have been interested in whether we can see anything happening with flu surveillance (especially ILI) in places with COVID outbreaks, Am interested in looking at Japan, Hong Kong, Singapore, and Italy. So far, only found Hong Kong (Eva Lee found it). I will keep looking—really interested in South Korea and Italy to get a better sense of whether looking st ILI will be of any value. https://www.chp.gov.hk/files/pdf/fluexpress_week8_27_2_2020_eng.pdf [[chp.gov.hk](#)] [[protect2.fireeye.com](#)] [[protect2.fireeye.com](#)] This is data thru Feb 22 (week 8). Hong Kong is really do a good job of surveillance. And what they are doing in terms of NPIs seems to be working (just like Singapore).





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From: [Caneva, Duane](#)

Sent: Saturday, February 29, 2020 11:18 PM

To: [Lawler, James V](#); [Carter Mecher](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: Re: VA Projections using Cruise Ship Data

+ Charity

CA seems first up.

Get Outlook for iOS [aka.ms] [protect2.fireeye.com] [protect2.fireeye.com]

From: Lawler, James V (b)(6)@unmc.edu
Sent: Saturday, February 29, 2020 11:06:20 PM
To: Carter Mecher (b)(6)@charter.net; Callahan, Michael V., M.D. (b)(6)@mgh.harvard.edu
Cc: Marcozzi, David (b)(6)@som.umaryland.edu; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane (b)(6)@hq.dhs.gov; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert (b)(6)@me.com
Subject: Re: VA Projections using Cruise Ship Data

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

Math looks good, Carter. And your calculations are enlightening. I had thought that hospital and ICU surveillance would be too late, but if you can do 100% surveillance on SARI in ICUs, then you might be able to act in time. Assume ICU is 1/5th of severe cases requiring hospitalization, then you are looking at roughly 12 cases per million. Let's assume 50% ascertainment rate for ICU, so when you detect 5-6 ICU COVID per million, you have hit your trigger. This assumes homogeneous distribution in communities, which is probably not true. So we may need to focus on certain segments (people from Chinatown in NY who are expected to have closer links to travelers from outbreak areas early) and have lower trigger – first 1-2 cases.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher (b)(6)@charter.net
Date: Saturday, February 29, 2020 at 6:53 PM
To: "Lawler, James V" (b)(6)@unmc.edu, "Callahan, m." (b)(6)@mgh.harvard.edu
Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" (b)(6)@hq.dhs.gov, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert (b)(6)@me.com
Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Something I have been thinking about wrt thresholds for NPIs. We usually think of the window for implementing NPIs as before 1% prevalence. But this disease has more than 50% asymptomatics, so the threshold is really 0.5% prevalence of any symptoms (including very mild symptoms). But CDC criteria for testing is severe disease. Let's say that 5% of those who are infected have severe disease, that means our threshold is 1%*5% = 0.05%. But it takes 2 weeks or so before a patient who is infected

becomes seriously ill. Over the span of 2 weeks plus the lag time for testing, the outbreak could have had at least 3 doublings (so an 8-fold increase). That may be conservative. So we are really talking about a threshold of close to $0.05\%/8 = 0.00625\%$. For a city of 1 M, that is 62 serious cases, 625 symptomatic, 1,250 infected. In 2 weeks, these numbers could be 500 serious, 5,000 symptomatic, 10,000 infected (the 1% threshold). Once you are there, the window is closed. If we assume a 3 week lag from infection onset to death, the number of deaths would be based on a denominator of 3 weeks ago, so divide 1,250 infected by roughly 3 (assume cases triple in a week), to get 400. Assume a CFR of 0.8%, so about 3 deaths. More than 3 deaths per million population is probably too late. Somebody could check my math.

Sent from Mail [go.microsoft.com] [protect2.fireeye.com] [protect2.fireeye.com] for Windows 10

From: Lawler, James V

Sent: Saturday, February 29, 2020 5:31 PM

To: Callahan, Michael V., M.D.

Cc: Marcozzi, David; Carter Mecher; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Caneva, Duane; Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

Agree. We have set our d/c criteria for persons in isolation (documented infection) at improved sx's, afebrile x48 hrs (off antipyretics) and swab neg X3 24 hrs apart.

James Lawler, MD, MPH, FIDSA

m. (b)(6)

(b)(6)@unmc.edu

From: "Callahan, m." (b)(6)@mgh.harvard.edu>

Date: Saturday, February 29, 2020 at 2:39 PM

To: "Lawler, James V" (b)(6)@unmc.edu>

Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu>, Carter Mecher

<(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane"

<(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert (b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Not great.....Better than poorly performed Induced sputum for AFB !

James, results from a 3rd Deep nasal swab could help us establish a viable protocol my 2 cents.

Michael Callahan MD MSPH DTM&H, DMCC (UK)
Director, Mass-Casualty Infection Operations
Vaccine & Immunotherapy Center
Massachusetts General Hospital

Boston, MA

Special Advisor to the Assistant Secretary of Public Health Preparedness and Response
U.S Dept of Health and Human Services
O'Neil Building 6th Floor
Washington, DC

On Feb 29, 2020, at 05:35, Lawler, James V <(b)(6)@unmc.edu> wrote:

External Email - Use Caution

NP x2 = 75% sensitivity, if my probability skilz are correct.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: "Marcozzi, David" <(b)(6)@som.umaryland.edu>
Date: Saturday, February 29, 2020 at 5:11 AM
To: "Lawler, James V" <(b)(6)@unmc.edu>, Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Wow, NP still misses 50%?

Can we assume this increase in magnitude (x2-3) for anyplace doing testing with NP? How much more sensitive with NP x2? That is what we do at Maryland.

Respectfully,

David Marcozzi, MD, MHS-CL, FACEP
Associate Professor
Associate Chair of Population Health
Department of Emergency Medicine
University of Maryland School of Medicine
[https://protect2.fireeye.com/url?k=79f89bb3-25ad9263-79f8aa8c-0cc47a6a52de-0eb626939df6f3df&u=https://em.umaryland.edu/\[em.umaryland.edu\]\[protect2.fireeye.com\]\[protect2.fireeye.com\]](https://protect2.fireeye.com/url?k=79f89bb3-25ad9263-79f8aa8c-0cc47a6a52de-0eb626939df6f3df&u=https://em.umaryland.edu/[em.umaryland.edu][protect2.fireeye.com][protect2.fireeye.com])

Associate Professor

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University of Maryland School of Medicine
<https://protect2.fireeye.com/url?k=b24cabfa-ee19a22a-b24c9ac5-0cc47a6a52de-f621ab7711e56705&u=https://www.medschool.umaryland.edu/epidemiology/> [medschool.umaryland.edu]
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Assistant Chief Medical Officer for Acute Care
University of Maryland Medical Center
<https://protect2.fireeye.com/url?k=ed2a38f6-b17f3126-ed2a09c9-0cc47a6a52de-76795810a6c5d915&u=http://www.umm.edu/> [umm.edu] [protect2.fireeye.com] [protect2.fireeye.com]

Deputy Medical Director for Mobile Integrated Health/Community Paramedicine
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Baltimore, Maryland 21201
(667)-214-2208 (office)

(b)(6) @som.umaryland.edu

Take time to deliberate; but when the time for action arrives, stop thinking and go in.
President Andrew Jackson

From: James Lawler <(b)(6)@unmc.edu>
Date: Friday, February 28, 2020 at 19:57
To: Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, David Marcozzi <(b)(6)@som.umaryland.edu>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Duane Caneva <(b)(6)@hq.dhs.gov>, Robert Kadlec <Robert.Kadlec@hhs.gov>, "(b)(6)" <(b)(6)@mgh.harvard.edu> <(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Interestingly Japanese health folks only did OP swabs x1. NP swabs are much more sensitive. OP for us about half as sensitive (or less). NP already misses 50% with a single swab. So would probably multiply Japanese swab + by 2-3 to get true infection rate.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation

Global Center for Health Security, and
Associate Professor of Medicine
Division of Infectious Diseases
University of Nebraska Medical Center
m. (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>
Sent: Friday, February 28, 2020 3:06:10 PM
To: Richard Hatchett <richard.hatchett@cepi.net>; Lawler, James V. <(b)(6)@unmc.edu>;
Marcozzi, David <(b)(6)@som.umaryland.edu>; Hepburn, Matthew J CIV USARMY (USA)
<matthew.j.hepburn.civ@mail.mil>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Kadlec, Robert
(OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Callahan, Michael V., M.D.
<(b)(6)@mgh.harvard.edu>; Tom Bossert <(b)(6)@me.com>
Subject: VA Projections using Cruise Ship Data

Non-UNMC email

I wanted to bounce this around the smaller group of wolverines. I also pulled the numbers of deaths annually in veterans and estimated deaths for all 19 M veterans using age specific death rates for males. The interesting thing is that the numbers of projected deaths related to COVID are actually pretty small compared to what we normally see for veterans. The challenge will be the amount of acute care—especially ICU care. The only chance that VA has is that we can knock down the attack rate thru TLC. The demand for acute care is overwhelming. The system would collapse under that level of demand.

Estimates of the impact of COVID on VA

In FY2019, VA cared for 6,271,019 unique veterans and had 9,237,638 veteran enrollees.

The Diamond Princess cruise ship outbreak can provide invaluable insights into the potential impact to VA.

Below is a comparison of the US population, the adult population aboard the cruise ship, and the Veteran population.

AGE	US Population 2017	% Distribution	Cruise Ship Passengers & Crew	% Distribution	FY2019 Veterans Vet Pop	% Distribution
20-29 years	45,489,095	19%	347	9%	932,473	5%
30-39 years	43,204,209	18%	428	12%	1,989,045	10%
40-49 years	40,617,231	17%	334	9%	2,194,505	11%
50-59 years	43,409,050	18%	398	11%	3,169,787	17%
60-69 years	36,824,083	15%	923	25%	3,735,399	19%
70-79 years	21,588,326	9%	1,015	27%	4,405,551	23%
>80 years	12,433,972	5%	227	6%	2,782,943	14%
Total population	243,565,966	100%	3,672	100%	19,209,704	100%

The Veteran population is similar to the Diamond Princess cruise ship population. If anything, the veteran population is even older (so at even higher risk). There were 3,711 passengers and crew aboard the crew ship (1,045 crew and 2,666 passengers). As of February 28, 2020, there have been 751 confirmed cases of COVID (attack rate of 20%). There have been 6 deaths thus far (lower limit of a case fatality rate of 0.80%). [A timeline of the outbreak is provided at the bottom of this message.] 380 of the confirmed cases were asymptomatic (50.6%). It is estimated that approximately 12-15% of the 751 passengers and crew with confirmed disease required acute care with 36 hospitalized patients reported to be in serious condition (5%). We looked at a range of ICU admissions (2%-5% of those who become infected).

Given the similarities of the demographics of the cruise ship and veterans, we could project the potential impact on veterans.

Veterans	Population FY2019	Total Infected (20% AR)	Number Asymptomatic (50.6%)	Hospitalizations 12%	ICU Admissions 2%	ICU Admissions 5%	Deaths CFR 0.80%
All Veterans	19,209,704	3,841,941	1,944,022	461,033	76,839	192,097	30,736
Veteran Enrollees	9,237,638	1,847,528	934,849	221,703	36,951	92,376	14,780
Veteran Uniques	6,271,019	1,254,204	634,627	150,504	25,084	62,710	10,034

Need to place these numbers into perspective.

Acute Inpatient Care	VHA Total
Operating Beds Hospital	15,744
Operating Beds Medicine/Surgery	9,817
Operating Beds ICU	1,692
ADC Hospital	9,805
ADC Medicine/Surgery	6,225
ADC ICU	1,101
ADC On a Ventilator	240
Daily Hospital Admissions	1,641
Daily Admissions Medicine/Surgery	1,226
Daily Admissions/Transfers in ICU	389
Emergency Department Care	
Daily ER Visits	6,874
Outpatient Care (non-ER)	
Daily Clinic Visits	209,336

The estimated number of deaths for all 19 M veterans is ~556,000. The number of annual deaths of veteran enrollees in FY2019 was 350,737. The projected number of COVID deaths for veterans is 14,780

The number of veterans who had an acute care hospitalization in FY2019 and died at any time during FY2019 was 62,375. The number of COVID deaths projected in veteran uniques (users) is 10,034.

Annually, VA has:

- 600,000 acute (medical/surgical) admissions
- 140,000 ICU admissions
- 2.5M ER/Urgent Care visits

If we assume that this outbreak will last approximately 3 months, we can then overlay the projected demand upon the usual background utilization over 3 months.

Even if we simply focus on the veteran uniques (veterans who used VA services and not enrollees), the numbers are a little overwhelming. We assumed that there might be 3 ER visits for each admission--so roughly 450,000 ER visits, 150,000 hospitalizations, and 25,000-63,000 ICU admissions.

Over an average 3-month period, VA would have ~625,000 ER/Urgent care visits, 150,000 acute care admissions, and 35,000 ICU admissions.

We assumed that acutely ill COVID patients will have long lengths of stay (14-21 days). If VA needs to absorb 150,000 hospitalizations (each with a LOS of 14-21 days), it would require 2.1 M to 3.2 M BDOCs.

If we assumed 14 day LOS for each ICU admission, 25,000-63,000 ICU admissions would equate to 350,000-882,000 ICU BDOCs.

The VA has 15,744 hospital operational beds (runs an ADC of only 9,805). Even if VA mobilized all those potential beds (15,744), for 3 months (90 days), we would generate the capacity for 1.4 M BDOCs.

Demand for care would exceed capacity by 700K BDOCs for a 14 day LOS and 1.7M BDOCs for a LOS of 21 days (1.5-2.2 times maximum capacity).

The VA has 1,692 ICU beds (runs an ADC of 1,101). Mobilizing all 1,692 ICU beds for 3 months (90 days), we would generate 152,000 BDOCs. Demand for ICU care would exceed capacity by 200,000-730,000 ICU BDOCs (2-5 times existing capacity).

This demand for care would not be constant across the 3 month period. The demand would rise exponentially, plateau, and then fall. The real concern is what will happen during the peak period of the epidemic.

VA does not have enough capacity to meet this demand, even if it mobilized every potential hospital bed to care for COVID patients (and there would be no capacity to care for usual demand for non-COVID acute care). And all this will be happening with a VA workforce that will be significantly diminished due to illness, home isolation, home quarantine and childminding responsibilities related to closure of schools and daycare, and fear.

Timeline of Diamond Princess cruise ship outbreak

Date	Event	Cumulative Number of Confirmed Cases	Cumulative Number of Deaths	Note
20-Jan	Cruise ship departs from Yokohama Japan			
25-Jan	80 year old passenger disembarks in Hong Kong			

1-Feb	80 year old passenger confirmed to have COVID-19			
	When results known, certificate of landing canceled and ship under quarantine. Tests for the virus would be administered to three groups: those with symptoms, those who got off in Hong Kong, and those who had close contact with the infected passenger.			
3-Feb	Ship arrives in port of Yokohama Japan			
5-Feb	10 passengers and crew confirmed +	10		
6-Feb	31 more passengers and crew confirmed +	41		
7-Feb	30 more passenger and crew confirmed +	61		
8-Feb	9 more passenger and crew confirmed +	70		
10-Feb	66 more passenger and crew confirmed +	136		439 tes
11-Feb	39 more passenger and crew confirmed +	175		492 tes
12-Feb	28 more passenger and crew confirmed +	203		4 in IC
13-Feb	15 more passenger and crew confirmed +	218		713 tes
14-Feb	67 more passenger and crew confirmed +	285		927 tes
15-Feb	70 more passenger and crew confirmed +	355		1,211 tested; asymptomatic
16-Feb	329 American evacuated from cruise ship (14 of the evacuees found to be +) 61 Americans remained on board 44 Americans remained hospitalized in Japan	369		
17-Feb	85 more passenger and crew confirmed +	454		1,721 tested; serious
18-Feb	167 more passenger and crew confirmed +	621		3,011 te
19-Feb	2 deaths	621	2	
20-Feb	13 more passenger and crew confirmed +	634	2	3,066 tested; seriously ill asymptomatic
23-Feb	Death reported in Japan		3	
24-Feb	Japan updates total to 691; US reports 36 in US	691	3	
25-Feb	Death reported in Japan; US reports 40 in US; UK 4; Australia 7; Hong Kong 4; Israel 2; Total 744; plus 4 not on ship	734	4	3,890 tested; seriously ill asymptomatic

26-Feb	US reports total of 42 cases in US; Japan announces that 45 of 813 former passengers have symptoms and will need to be tested; 14 new cases confirmed in the Diamond Princess cruise ship, raising the total to 705 cases inside the ship	750	4	
27-Feb	Australia (+1) 8 cases (repatriated)	751	4	
28-Feb	2 death reported in Japan	751	6	

As a check on deaths, I applied the age specific death rates per 100,000 population for the entire veteran population of 19M (90% male)

AGE	2019 VetPop	2017 Male All Cause Mortality per 100,000	Estimated 2017 All Cause Deaths
20 to 24 years	262,415	137.9	362
25 to 29 years	670,058	171.3	1,148
30 to 34 years	933,598	196.3	1,833
35 to 39 years	1,055,447	227.1	2,397
40 to 44 years	1,004,755	273.6	2,749
45 to 49 years	1,189,750	387.3	4,608
50 to 54 years	1,457,440	604.4	8,809
55 to 59 years	1,712,347	919.5	15,745
60 to 64 years	1,867,136	1,328.3	24,801
65 to 69 years	1,868,263	1,831.8	34,223
70 to 74 years	2,703,684	2,668.0	72,134
75 to 79 years	1,701,867	4,193.7	71,371
80 to 84 years	1,187,331	6,901.6	81,945
85 years and over	1,595,611	14,689.2	234,383
Total population	19,209,704	863.8	556,507

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<image001.png>

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Sender:	Carter Mecher <(b)(6)@charter.net> Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Lawler, James V <(b)(6)@unmc.edu>; Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Caneva, Duane (DHS.GOV) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b6ba3c00c7944e1b99ed3eecab996186-Duane.Canev>;
Recipient:	Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>; Marcozzi, David <(b)(6)som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Sent Date:	2020/03/01 16:01:17
Delivered Date:	2020/03/01 16:01:53

From:	Mendonca, Pat - Washington, DC <pat.mendonca@usps.gov>
To:	Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>
CC:	Swigart, Michael </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6c48cbae8a604035948d20078a25e655-swigart.mic>; Plessas, Jude M - Washington, DC <Jude.M.Plessas@usps.gov>; Raub, William F - Washington, DC - Contractor <William.F.Raub@usps.gov>
Subject:	Information and a question.
Date:	2020/03/01 17:08:44
Priority:	Normal
Type:	Note

Bob:

I know you are really busy however I wanted to provide some information regarding one of our employees in Seattle who tested positive for the Coronavirus and ask for advice on an issue.

An employee from our Seattle WA Network Distribution Center facility reported yesterday that she tested positive for the Coronavirus. The employee had visited South Korea from February 7 to 23 and on Tuesday February 25 the employee worked as scheduled in the facility. The employee has been self-quarantined at home since Wednesday February 26 but has seen her physician and has tested positively for the virus.

We are working with Seattle public health officials to identify any other employees of interest and they have stated that the current risk to our employees is low and that the building in which the individual worked is safe for employees.

Upon hearing from the employee yesterday we immediately cleaned and disinfected the facility and in an abundance caution a second thorough cleaning and disinfection of the facility was done by one of our Emergency Response contractors.

Yesterday and today information regarding the situation with the employee and regarding COVID-19 (using CDC guidance) was given directly to our employees at the facility in a briefing. Our Occupational Nurse and the Cleaning Contractor were there to answer any employee questions. Local union officials also participated in the briefing. The briefing was well received by the employees and all of their question were answered.

The employee continues to be self-quarantined at home and is doing well and does not require hospitalization or medications. The employee will not return to work until she is cleared by local health officials.

We are handling all media inquiries received as well as monitoring social media for any employee concerns that have not been voiced to their managers.

We have been in touch with our unions and management associations both at the national and local levels and will be briefing the national presidents tomorrow in person.

You know our size and scope, in terms of federal employees and facilities across the United States, and our daily contact with the population.

It would be very helpful for us to have a point of contact to help us in clarifying how best to apply the CDC guidance to the specifics of the multiple incidents we will be dealing with in the coming days.

Do you have a recommendation regarding this?

Thank you for any help with this.

Pat

Sender:	Mendonca, Pat - Washington, DC <pat.mendonca@usps.gov>
Recipient:	Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Swigart, Michael </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6c48cbae8a604035948d20078a25e655-swigart.mic>; Plessas, Jude M - Washington, DC <Jude.M.Plessas@usps.gov>; Raub, William F - Washington, DC - Contractor <William.F.Raub@usps.gov>

Sent Date:	2020/03/01 17:08:35
Delivered Date:	2020/03/01 17:08:44

From:	Sherman, Jennifer (HHS/OASH) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=F30FE7FAE664419FA654B20EDCCB1E78-SHERMAN, JE>
To:	Schwartz, Erica (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=603e84a0e3744a5d8dcbd759f5dcad91-Schwartz, E>; Adams, Jerome (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=184fe51f7350400b8a99dabd65ac0db5-Adams, Jero>
CC:	Wright, Janet (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=41f672e2527b4f44891fb4fbe08cdfd-Wright, Jan>
Subject:	RE: AMA COVID19 Meeting Notes & Task Force Meeting Notes
Date:	2020/03/01 17:11:48
Priority:	Normal
Type:	Note

UPDATE: Situation Room TOMORROW at 4pm.

From: Sherman, Jennifer (HHS/OASH)
Sent: Sunday, March 1, 2020 5:10 PM
To: Schwartz, Erica (HHS/OASH) <Erica.Schwartz@hhs.gov>; Adams, Jerome (HHS/OASH) <Jerome.Adams@hhs.gov>
Cc: Wright, Janet (HHS/OASH) <Janet.Wright@HHS.GOV>
Subject: RE: AMA COVID19 Meeting Notes & Task Force Meeting Notes

(b)(5)

From: Schwartz, Erica (HHS/OASH) <Erica.Schwartz@hhs.gov>
Sent: Sunday, March 1, 2020 5:04 PM
To: Adams, Jerome (HHS/OASH) <Jerome.Adams@hhs.gov>
Cc: Sherman, Jennifer (HHS/OASH) <Jennifer.Sherman@hhs.gov>; Wright, Janet (HHS/OASH) <Janet.Wright@HHS.GOV>
Subject: AMA COVID19 Meeting Notes & Task Force Meeting Notes

VADM Adams,

(b)(5)

v/r,

RADM Erica Schwartz, MD, JD, MPH
Deputy Surgeon General
Office of the Surgeon General

United States Public Health Service
U.S. Department of Health and Human Services
200 Independence Ave SW, Suite 701-H
Washington, DC 20201
Office Phone: 202-401-4660
Email: erica.schwartz@hhs.gov

Sender:	Sherman, Jennifer (HHS/OASH) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=F30FE7FAE664419FA654B20EDCCB1E78-SHERMAN, JE>
Recipient:	Schwartz, Erica (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=603e84a0e3744a5d8dcdb759f5dcad91-Schwartz, E>; Adams, Jerome (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=184fe51f7350400b8a99dabd65ac0db5-Adams, Jero>; Wright, Janet (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=41f672e2527b4f44891fb4fbe08cdfd-Wright, Jan>
Sent Date:	2020/03/01 17:11:21
Delivered Date:	2020/03/01 17:11:48
Message Flags:	Unread

From:	Kadlec, Robert (OS/ASPR/IO) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A182EDA693D040D3832BAE6EFCF7A255-KADLEC, ROB>
To:	Yeskey, Kevin (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6fe6cf13518445fd9c3a1c254e166b3f-Yeskey, Kev>; Greene, Jonathan (OS/ASPR/EMMO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1b692a4d6cff4afabbbee99d35336ece-Greene, Jon>
Subject:	FW: For Your Attention and Review: INFORMATIONAL
Date:	2020/03/01 18:16:00
Importance:	High
Priority:	Urgent
Type:	Note

My apologies

From: Kadlec, Robert (OS/ASPR/IO)
Sent: Sunday, March 1, 2020 5:56 PM
To: Harrison, Brian (HHS/IOS) <Brian.Harrison@hhs.gov>
Cc: Shuy, Bryan (OS/ASPR/IO) (Bryan.Shuy@hhs.gov) <Bryan.Shuy@hhs.gov>; Stecker, Judy (OS/IOS) <Judy.Stecker@hhs.gov>; Mango, Paul (HHS/IOS) <Paul.Mango@hhs.gov>; Adams, Steven A. (CDC/SNS/DSNS) <saa1@cdc.gov>
Subject: For Your Attention and Review: INFORMATIONAL
Importance: High

State health officials in Washington State submitted a request for federal assistance through the governor to the HHS Assistant Secretary for Preparedness and Response (ASPR) on the evening Feb. 29, 2020.

As has been reported widely in the media, Washington State is responding to potential community-based COVID-19 transmission cohort in a high risk population and was the location of the first U.S. death attributed to COVID-19.

The original requested equipment includes 200,000 N95 respirators, 200,000 surgical/face masks, 5,000 face shields, 64,000 pairs of gloves and 60,000 disposable gowns. ASPR SNS entered into a discussion with State officials to determine what the State of Washington's actual needs were and mutually agreed to provide the following:

- 100,000 N95 respirators
- 100,200 surgical/face masks
- 2,565 face shields
- 32,000 pairs of gloves
- 30,000 disposable gowns (shipped directly from commercial supplier)

This request, based on acute actual need, was approved by the ASPR. On March 1, 2020, the Strategic National Stockpile (SNS) received direction to deploy personal protective equipment (PPE) to

Washington State to assist with the State's ongoing COVID-19 response efforts.

Some of this PPE, including surgical/face masks and face shields, have exceeded their manufacturer-designated shelf life. These items do not require formation of an airtight seal and may still provide barrier protection. According to CDC's National Institute for Occupational Safety and Health, in times when demand significantly outpaces supply, consideration can be made to use surgical/face masks, face shields and gloves past their manufacturer-designated shelf life when responding to the COVID-19 public health emergency.

The State was advised of this situation and recommend these products to be visually inspected before use. If noticeable deterioration is observed, the item should be discarded.

Sender:	Kadlec, Robert (OS/ASPR/IO) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A182EDA693D040D3832BAE6EFCF7A255-KADLEC, ROB>
Recipient:	Yeskey, Kevin (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6fe6cf13518445fd9c3a1c254e166b3f-Yeskey, Kev>; Greene, Jonathan (OS/ASPR/EMMO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1b692a4d6cff4afabbbee99d35336ece-Greene, Jon>
Sent Date:	2020/03/01 18:16:11
Delivered Date:	2020/03/01 18:16:00

From:	Kadlec, Robert (OS/ASPR/IO) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A182EDA693D040D3832BAE6EFCF7A255-KADLEC, ROB>
To:	Yeskey, Kevin (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6fe6cf13518445fd9c3a1c254e166b3f-Yeskey, Kev>
Subject:	FW: As requested.
Date:	2020/03/01 18:17:00
Priority:	Normal
Type:	Note

For your guidance Best Bob

From: Marcozzi, David <(b)(6)@som.umaryland.edu>
Sent: Sunday, March 1, 2020 1:26 PM
To: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>
Subject: As requested.

To my response colleagues, a consideration.

The impact to our nation's healthcare system, delivering care to those who need it typically and to those who need it as a result of COVID-19, will be significant. It is likely you will push out guidance that you want hospitals to adopt, describing best practices to enact during a pandemic. The truth is, we are going to war with what we have. Hospitals will attempt to make changes to their care delivery system, but this type of change for healthcare colleagues who don't think like us every day, is difficult to digest and implement. That said, they are trying and changing as we face this threat together. With our window closing and to encourage more rapid adoption of improved readiness for our nation's healthcare delivery system, I have one request which has a multitude of effects. Additionally, as we are all aware, COVID-19 will mainly affect the geriatric population and this tool will support that care directly. There is precedent to create a payment mechanism to incentivize care during a disaster.

A supplemental, pushed to states and then to localities won't move fast enough nor create the significant 'carrot' to pivot the system and CFOs realize this is one-time funding. One-time special grant funding does not encourage rapid, sustainable and substantial change. Simply, you can't grant your way to success. Businesses don't work that way and neither does healthcare.

The fix: Use the National Disaster Medical System (NDMS) Definitive Care Reimbursement Program (<https://protect2.fireeye.com/url?k=c855d11d-9400d80e-c855e022-0cc47adb5650-edb4c9cd6964f5d1&u=https://www.phe.gov/Preparedness/responders/ndms/definitive-care/Pages/default.aspx>). Allow the PHE to enact this program without mandating NDMS involvement. Tie it to any claims linked to COVID-19. Assure that other payers follow suit. This change creates an incentive for surge and care for these patients. This change engages every component of the healthcare delivery system. This change synergizes completely with the financial mechanisms and processes this nation uses on a daily basis. This change doesn't create more administrative burden on facilities, grantees, grantors or states. This change can be enacted swiftly.

This change may help make a difference.

Yes, there will be CMS providers and suppliers that will try to abuse this preparedness tool. Assure that CMS's CPI is engaged prior to enacting.

Sender:	Kadlec, Robert (OS/ASPR/IO) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A182EDA693D040D3832BAE6EFCF7A255-KADLEC, ROB>
Recipient:	Yeskey, Kevin (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6fe6cf13518445fd9c3a1c254e166b3f-Yeskey, Kev>
Sent Date:	2020/03/01 18:17:09
Delivered Date:	2020/03/01 18:17:00

From:	Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.UP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A182EDA693D040D3832BAE6EFCF7A255-KADLEC, ROB>
To:	Caneva, Duane <(b)(6)@hq.dhs.gov>
Subject:	RE: VA Projections using Cruise Ship Data
Date:	2020/03/01 18:19:00
Priority:	Normal
Type:	Note

sure

From: Caneva, Duane <duane.caneva@hq.dhs.gov>
Sent: Sunday, March 1, 2020 11:23 AM
To: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>
Subject: RE: VA Projections using Cruise Ship Data

Assuming you want Tom B., Ralph B, Jim LeDuc on the call as well?

From: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>
Sent: Sunday, March 1, 2020 8:25 AM
To: Carter Mecher <cmecher@charter.net>; Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>
Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

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Here is something to ponder from the China CDC report from a couple of days ago.

“A main finding of this characterization and exploratory analysis of the first 72,314 cases of COVID-19 found in China in the 40 days between first recognition of the outbreak of pneumonia with unknown etiology on December 31, 2019 to the end of the study period on February 11, 2020 is that this novel coronavirus is highly contagious. It has spread extremely rapidly from a single city to the entire country within only about 30 days. Moreover, it has achieved such far-reaching effects even in the face of extreme response measures including the complete shutdown and isolation of whole cities, cancellation of Chinese New Year celebrations, prohibition of attendance at school and work, massive mobilization of

health and public health personnel as well as military medical units, and rapid construction of entire hospitals.”

From: Carter Mecher <(b)(6)@charter.net>
Sent: Sunday, March 1, 2020 7:58 AM
To: Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>
Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

James said something to me that I do want to frame on the good wall (not the bad wall of understatements).

He gave a presentation to education leaders and I’m paraphrasing: With pandemic flu we would close the schools to protect the kids and reduce community transmission. With COVID we would close the schools (not so much to protect the kids), but to reduce community transmission and protect their grandparents.

James can phrase it better than I can—but that is the message. Tom are you listening?

Sent from Mail for Windows 10

From: Lawler, James V
Sent: Sunday, March 1, 2020 7:41 AM
To: Carter Mecher; Caneva, Duane; Callahan, Michael V., M.D.; Dean, Charity A@CDPH
Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Kadlec, Robert (OS/ASPR/IO); Tom Bossert
Subject: Re: VA Projections using Cruise Ship Data

Listening to CNN “experts” this morning. They have no clue what they are talking about – saying that young people really shouldn’t worry and older/vulnerable folks are the only ones that should be changing behavior. No concept that our elders are depending on the actions of the entire community and also that once the healthcare system collapses, all of the services for which younger folks access that system will be gone as well. We have to get out in front of messaging.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>
Date: Sunday, March 1, 2020 at 6:20 AM
To: "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Lawler, James V"

(b)(6)@unmc.edu>, "Callahan, m." (b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <charity.dean@cdph.ca.gov>

Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert (b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

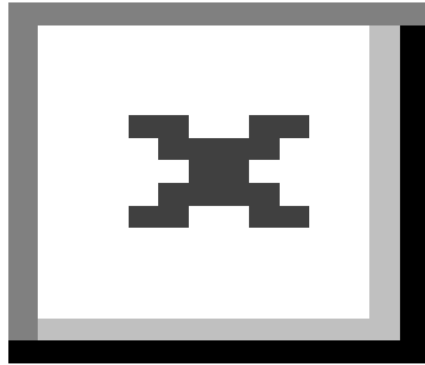
Non-UNMC email

Also have been thinking more about thresholds for pulling triggers.

I thought a but more about what James said about true prevalence—that it would be at least twice as high as we currently think it is on the cruise ship. That would mean that true attack rate is closer to 40%, 80% of cases are asymptomatic, 6% of cases are hospitalized, 1% are critical (in ICU), and CFR is about 0.5%. But given the demographics of the cruise ship we are really the diluting effect of kids and young adults. They would be expected to have high attack rates and even higher rates of asymptomatic disease and mild disease (pushing up the % asymptomatics, reducing the overall hospitalization rate, ICU rate and CFR). So wanted to play with those estimates of thresholds again (will resend updated math).

Yesterday I was at my daughter's house helping them pull out vines that were planted as ground cover. The damn things grow everywhere, climbing up trees and smothering them (this isn't kudzu). My wife said something about these vines that made me think of what we are seeing in South Korea, Italy and now the US. When you plant these vines, they go thru 3 stages—sleep, creep, and leap. First year they don't seem to be doing much—they sleep (but they are laying down a root system that you cannot see). The next year they creep (seeing some spread above ground while the root system hidden from view continues to spread). And the next year they leap (the vines seem to explode everywhere you look).

That is exactly what Italy feels like (but speeded up). We are blind to what is "happening underground." The root system is really those dendrite transmission trees that Richard likes. I pulled out the Singapore graphic again of their contact tracing of cases (that is the root system). They have given up continuing to update that graphic and only providing linkages between cases when they provide brief summaries of individual cases. Probably getting to complex to show.



cid:image001.png@01D5EF91.940CA250

In the US we just pulled up three random roots that are far from any plants we can see above the surface. My concern is that we are at the cusp of “leap” and cases are going to start popping like popcorn wherever we look.

This gets to the timing of NPIs

I went back to the Philadelphia-St Louis comparison of 1918. The difference between Philadelphia and St. Louis in 1918 in terms when they pulled the trigger on NPIs was about two weeks during the course of their individual outbreaks. In St. Louis, NPIs were put in place 1 week after the first cases at Jefferson Barracks, 5 days after the first death, and 3 days after the first civilian cases in St. Louis. In Philadelphia, NPIs were put in place 3 weeks after the first cases at the Navy Yard, 16 days after the first civilian cases in Philadelphia, 2 weeks after the first death.

We would estimate that the outbreak in Wuhan had about a 2 week head start on the rest of Hubei. So the measures China implemented to slow transmission happened about two later in the course of the outbreak in Wuhan compared to the rest of Hubei Province. A comparison of hospitalization rate looks a lot like Philadelphia and St. Louis.

Hong Kong confirmed its first case of a traveler from Wuhan on Jan 23 (symptom onset of Jan 18). They would later learn of their first case of local transmission with symptom onset on Jan 22. On Jan 25, within 1 week of the symptom onset of the first case of a traveler and within 3 days of symptom onset of the first local case, they were already taking actions like suspending the reopening of schools—they were a bit lucky because the schools were closed for the Chinese New Year. So they took aggressive actions within 1 week of first recognized case. There was a lot of activity in Hong Kong in the first 3 weeks of January (large number of suspected cases that they were monitoring but they were only had

syndromic surveillance since there were no diagnostics early on. So Hong Kong had been busy isolating scores of patients during the first 3 weeks of January based only on clinical presentation.

Singapore confirmed its first case on January 23 (traveler from Wuhan). The individual had symptom onset on Jan 20 on a flight to Singapore. On Feb 3, Singapore confirmed its first case of local transmission. Symptom onset for that individual was on Jan 29. On Feb 7, Singapore identified additional cases of local transmission and declared Code Orange and intensifies response. So Singapore takes aggressive action two weeks after confirmation of 1st case in a traveler and within 4 days of first case of local transmission.

Sent from [Mail \[go.microsoft.com\]](mailto:Mail [go.microsoft.com]) for Windows 10

From: [Carter Mecher](#)

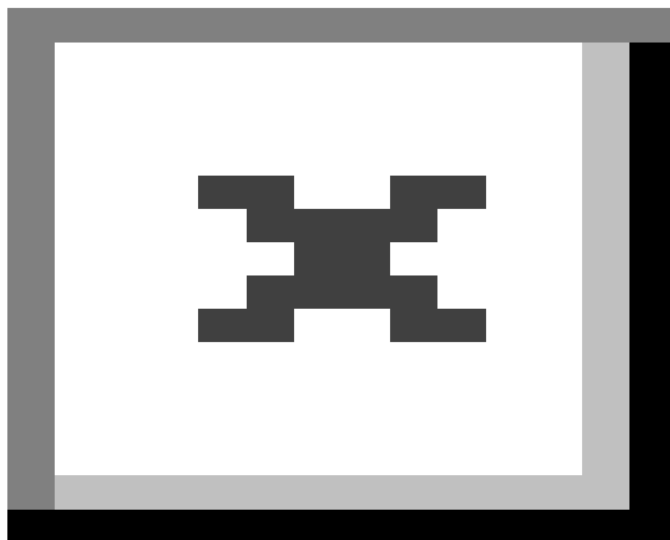
Sent: Sunday, March 1, 2020 5:58 AM

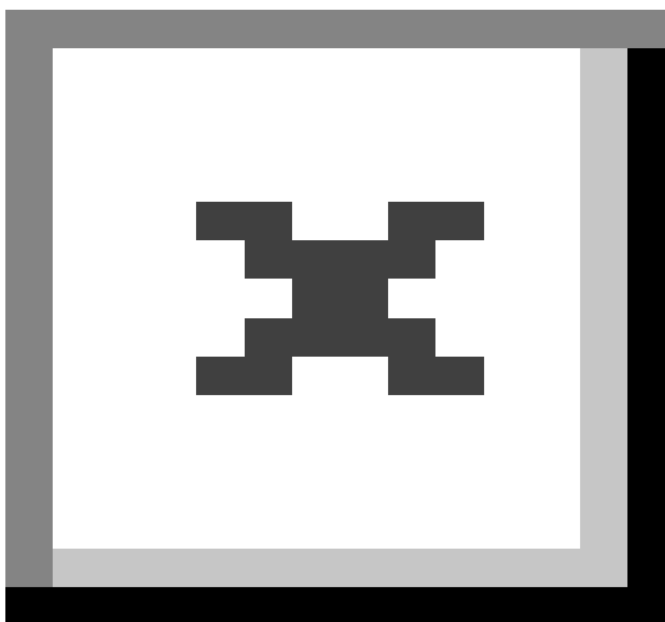
To: [Caneva, Duane](#); [Lawler, James V](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: RE: VA Projections using Cruise Ship Data

A few things for the group. Have been interested in whether we can see anything happening with flu surveillance (especially ILI) in places with COVID outbreaks, Am interested in looking at Japan, Hong Kong, Singapore, and Italy. So far, only found Hong Kong (Eva Lee found it). I will keep looking—really interested in South Korea and Italy to get a better sense of whether looking st ILI will be of any value. https://www.chp.gov.hk/files/pdf/fluexpress_week8_27_2_2020_eng.pdf [chp.gov.hk] This is data thru Feb 22 (week 8). Hong Kong is really do a good job of surveillance. And what they are doing in terms of NPIs seems to be working (just like Singapore).





Sent from [Mail \[go.microsoft.com\]](mailto:Mail [go.microsoft.com]) for Windows 10

From: [Caneva, Duane](#)

Sent: Saturday, February 29, 2020 11:18 PM

To: [Lawler, James V](#); [Carter Mecher](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: Re: VA Projections using Cruise Ship Data

+ Charity

CA seems first up.

Get Outlook for iOS [aka.ms]

From: Lawler, James V <(b)(6)@unmc.edu>
Sent: Saturday, February 29, 2020 11:06:20 PM
To: Carter Mecher <(b)(6)@charter.net>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>
Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

Math looks good, Carter. And your calculations are enlightening. I had thought that hospital and ICU surveillance would be too late, but if you can do 100% surveillance on SARI in ICUs, then you might be able to act in time. Assume ICU is 1/5th of severe cases requiring hospitalization, then you are looking at roughly 12 cases per million. Let's assume 50% ascertainment rate for ICU, so when you detect 5-6 ICU COVID per million, you have hit your trigger. This assumes homogeneous distribution in communities, which is probably not true. So we may need to focus on certain segments (people from Chinatown in NY who are expected to have closer links to travelers from outbreak areas early) and have lower trigger – first 1-2 cases.

James Lawler, MD, MPH, FIDSA

m. (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>
Date: Saturday, February 29, 2020 at 6:53 PM
To: "Lawler, James V" <(b)(6)@unmc.edu>, "Callahan, m." <(b)(6)@mgh.harvard.edu>
Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Something I have been thinking about wrt thresholds for NPIs. We usually think of the window for implementing NPIs as before 1% prevalence. But this disease has more than 50% asymptomatics, so the threshold is really 0.5% prevalence of any symptoms (including very mild symptoms). But CDC criteria for testing is severe disease. Let's say that 5% of those who are infected have severe disease, that means our threshold is 1%*5% = 0.05%. But it takes 2 weeks or so before a patient who is infected

becomes seriously ill. Over the span of 2 weeks plus the lag time for testing, the outbreak could have had at least 3 doublings (so an 8-fold increase). That may be conservative. So we are really talking about a threshold of close to $0.05\%/8 = 0.00625\%$. For a city of 1 M, that is 62 serious cases, 625 symptomatic, 1,250 infected. In 2 weeks, these numbers could be 500 serious, 5,000 symptomatic, 10,000 infected (the 1% threshold). Once you are there, the window is closed. If we assume a 3 week lag from infection onset to death, the number of deaths would be based on a denominator of 3 weeks ago, so divide 1,250 infected by roughly 3 (assume cases triple in a week), to get 400. Assume a CFR of 0.8%, so about 3 deaths. More than 3 deaths per million population is probably too late. Somebody could check my math.

Sent from Mail [go.microsoft.com] for Windows 10

From: Lawler, James V

Sent: Saturday, February 29, 2020 5:31 PM

To: Callahan, Michael V., M.D.

Cc: Marcozzi, David; Carter Mecher; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Caneva, Duane; Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

Agree. We have set our d/c criteria for persons in isolation (documented infection) at improved sx's, afebrile x48 hrs (off antipyretics) and swab neg X3 24 hrs apart.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Callahan, m." (b)(6)@mgh.harvard.edu>

Date: Saturday, February 29, 2020 at 2:39 PM

To: "Lawler, James V" (b)(6)@unmc.edu>

Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu>, Carter Mecher

(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane"

(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert (b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Not great.....Better than poorly performed Induced sputum for AFB !

James, results from a 3rd Deep nasal swab could help us establish a viable protocol my 2 cents.

Michael Callahan MD MSPH DTM&H, DMCC (UK)

Director, Mass-Casualty Infection Operations

Vaccine & Immunotherapy Center

Massachusetts General Hospital

Boston, MA

Special Advisor to the Assistant Secretary of Public Health Preparedness and Response
U.S Dept of Health and Human Services
O'Neil Building 6th Floor
Washington, DC

On Feb 29, 2020, at 05:35, Lawler, James V <(b)(6)@unmc.edu> wrote:

External Email - Use Caution

NP x2 = 75% sensitivity, if my probability skilz are correct.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: "Marcozzi, David" <(b)(6)@som.umaryland.edu>
Date: Saturday, February 29, 2020 at 5:11 AM
To: "Lawler, James V" <(b)(6)@unmc.edu>, Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Wow, NP still misses 50%?

Can we assume this increase in magnitude (x2-3) for anyplace doing testing with NP? How much more sensitive with NP x2? That is what we do at Maryland.

Respectfully,

David Marcozzi, MD, MHS-CL, FACEP
Associate Professor
Associate Chair of Population Health
Department of Emergency Medicine
University of Maryland School of Medicine
[https://protect2.fireeye.com/url?k=71df7f2e-2d8a763d-71df4e11-0cc47adb5650-329b3569ca7e07b7&u=https://em.umaryland.edu/\[em.umaryland.edu\]](https://protect2.fireeye.com/url?k=71df7f2e-2d8a763d-71df4e11-0cc47adb5650-329b3569ca7e07b7&u=https://em.umaryland.edu/[em.umaryland.edu])

Associate Professor
Department of Epidemiology and Public Health

University of Maryland School of Medicine
<https://protect2.fireeye.com/url?k=9cddb120-c08eb833-9cdb801f-0cc47adb5650-f8bc55b1c3193033&u=https://www.medschool.umaryland.edu/epidemiology/> [medschool.umaryland.edu]

Assistant Chief Medical Officer for Acute Care
University of Maryland Medical Center
<https://protect2.fireeye.com/url?k=317fc227-6d2acb34-317ff318-0cc47adb5650-63b0afac7b3ee858&u=http://www.umm.edu/> [umm.edu]

Deputy Medical Director for Mobile Integrated Health/Community Paramedicine
Baltimore City Fire Department
<https://protect2.fireeye.com/url?k=833f4596-df6a4c85-833f74a9-0cc47adb5650-fb2a3eff6a5aa943&u=https://protect2.fireeye.com/url?k=09aa77d0-55fe5efb-09aa46ef-0cc47a6d17cc-688ea8ebe48d26b6&u=https://fire.baltimorecity.gov/mobile-integrated-health-community-paramedicine> [fire.baltimorecity.gov]

Mailing Address:
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110 South Paca Street
Baltimore, Maryland 21201
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Take time to deliberate; but when the time for action arrives, stop thinking and go in.
President Andrew Jackson

From: James Lawler (b)(6)@unmc.edu>
Date: Friday, February 28, 2020 at 19:57
To: Carter Mecher <cmecher@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, David Marcozzi (b)(6)@som.umaryland.edu>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Duane Caneva (b)(6)@hq.dhs.gov>, Robert Kadlec <Robert.Kadlec@hhs.gov>, (b)(6)@mgh.harvard.edu" (b)(6)@mgh.harvard.edu>, Tom Bossert (b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Interestingly Japanese health folks only did OP swabs x1. NP swabs are much more sensitive. OP for us about half as sensitive (or less). NP already misses 50% with a single swab. So would probably multiply Japanese swab + by 2-3 to get true infection rate.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation
Global Center for Health Security, and
Associate Professor of Medicine
Division of Infectious Diseases

University of Nebraska Medical Center

m: (b)(6)

(b)(6)@unmc.edu

From: Carter Mecher (b)(6)@charter.net>

Sent: Friday, February 28, 2020 3:06:10 PM

To: Richard Hatchett <richard.hatchett@cepi.net>; Lawler, James V (b)(6)@unmc.edu>; Marcozzi, David (b)(6)@som.umaryland.edu>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane (b)(6)@hq.dhs.gov>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Callahan, Michael V., M.D.

(b)(6)@mgh.harvard.edu>; Tom Bossert (b)(6)@me.com>

Subject: VA Projections using Cruise Ship Data

Non-UNMC email

I wanted to bounce this around the smaller group of wolverines. I also pulled the numbers of deaths annually in veterans and estimated deaths for all 19 M veterans using age specific death rates for males. The interesting thing is that the numbers of projected deaths related to COVID are actually pretty small compared to what we normally see for veterans. The challenge will be the amount of acute care—especially ICU care. The only chance that VA has is that we can knock down the attack rate thru TLC. The demand for acute care is overwhelming. The system would collapse under that level of demand.

Estimates of the impact of COVID on VA

In FY2019, VA cared for 6,271,019 unique veterans and had 9,237,638 veteran enrollees.

The Diamond Princess cruise ship outbreak can provide invaluable insights into the potential impact to VA.

Below is a comparison of the US population, the adult population aboard the cruise ship, and the Veteran population.

AGE	US Population 2017	% Distribution	Cruise Ship Passengers & Crew	% Distribution	FY2019 Veterans Vet Pop	% Distribution
20-29 years	45,489,095	19%	347	9%	932,473	5%
30-39 years	43,204,209	18%	428	12%	1,989,045	10%
40-49 years	40,617,231	17%	334	9%	2,194,505	11%
50-59 years	43,409,050	18%	398	11%	3,169,787	17%
60-69 years	36,824,083	15%	923	25%	3,735,399	19%
70-79 years	21,588,326	9%	1,015	27%	4,405,551	23%
>80 years	12,433,972	5%	227	6%	2,782,943	14%
Total population	243,565,966	100%	3,672	100%	19,209,704	100%

The Veteran population is similar to the Diamond Princess cruise ship population. If anything, the veteran population is even older (so at even higher risk). There were 3,711 passengers and crew aboard the crew ship (1,045 crew and 2,666 passengers). As of February 28, 2020, there have been 751 confirmed cases of COVID (attack rate of 20%). There have been 6 deaths thus far (lower limit of a case

fatality rate of 0.80%). [A timeline of the outbreak is provided at the bottom of this message.] 380 of the confirmed cases were asymptomatic (50.6%). It is estimated that approximately 12-15% of the 751 passengers and crew with confirmed disease required acute care with 36 hospitalized patients reported to be in serious condition (5%). We looked at a range of ICU admissions (2%-5% of those who become infected).

Given the similarities of the demographics of the cruise ship and veterans, we could project the potential impact on veterans.

Veterans	Population FY2019	Total Infected (20% AR)	Number Asymptomatic (50.6%)	Hospitalizations 12%	ICU Admissions 2%	ICU Admissions 5%	Deaths CFR 0.80%
All Veterans	19,209,704	3,841,941	1,944,022	461,033	76,839	192,097	30,736
Veteran Enrollees	9,237,638	1,847,528	934,849	221,703	36,951	92,376	14,780
Veteran Uniques	6,271,019	1,254,204	634,627	150,504	25,084	62,710	10,034

Need to place these numbers into perspective.

Acute Inpatient Care	VHA Total
Operating Beds Hospital	15,744
Operating Beds Medicine/Surgery	9,817
Operating Beds ICU	1,692
ADC Hospital	9,805
ADC Medicine/Surgery	6,225
ADC ICU	1,101
ADC On a Ventilator	240
Daily Hospital Admissions	1,641
Daily Admissions Medicine/Surgery	1,226
Daily Admissions/Transfers in ICU	389
Emergency Department Care	
Daily ER Visits	6,874
Outpatient Care (non-ER)	
Daily Clinic Visits	209,336

The estimated number of deaths for all 19 M veterans is ~556,000. The number of annual deaths of veteran enrollees in FY2019 was 350,737. The projected number of COVID deaths for veterans is 14,780

The number of veterans who had an acute care hospitalization in FY2019 and died at any time during FY2019 was 62,375. The number of COVID deaths projected in veteran uniques (users) is 10,034.

Annually, VA has:

- 600,000 acute (medical/surgical) admissions
- 140,000 ICU admissions
- 2.5M ER/Urgent Care visits

If we assume that this outbreak will last approximately 3 months, we can then overlay the projected demand upon the usual background utilization over 3 months.

Even if we simply focus on the veteran uniques (veterans who used VA services and not enrollees), the numbers are a little overwhelming. We assumed that there might be 3 ER visits for each admission--so roughly 450,000 ER visits, 150,000 hospitalizations, and 25,000-63,000 ICU admissions.

Over an average 3-month period, VA would have ~625,000 ER/Urgent care visits, 150,000 acute care admissions, and 35,000 ICU admissions.

We assumed that acutely ill COVID patients will have long lengths of stay (14-21 days). If VA needs to absorb 150,000 hospitalizations (each with a LOS of 14-21 days), it would require 2.1 M to 3.2 M BDOCs.

If we assumed 14 day LOS for each ICU admission, 25,000-63,000 ICU admissions would equate to 350,000-882,000 ICU BDOCs.

The VA has 15,744 hospital operational beds (runs an ADC of only 9,805). Even if VA mobilized all those potential beds (15,744), for 3 months (90 days), we would generate the capacity for 1.4 M BDOCs.

Demand for care would exceed capacity by 700K BDOCs for a 14 day LOS and 1.7M BDOCs for a LOS of 21 days (1.5-2.2 times maximum capacity).

The VA has 1,692 ICU beds (runs an ADC of 1,101). Mobilizing all 1,692 ICU beds for 3 months (90 days), we would generate 152,000 BDOCs. Demand for ICU care would exceed capacity by 200,000-730,000 ICU BDOCs (2-5 times existing capacity).

This demand for care would not be constant across the 3 month period. The demand would rise exponentially, plateau, and then fall. The real concern is what will happen during the peak period of the epidemic.

VA does not have enough capacity to meet this demand, even if it mobilized every potential hospital bed to care for COVID patients (and there would be no capacity to care for usual demand for non-COVID acute care). And all this will be happening with a VA workforce that will be significantly diminished due to illness, home isolation, home quarantine and childminding responsibilities related to closure of schools and daycare, and fear.

Timeline of Diamond Princess cruise ship outbreak

Date	Event	Cumulative Number of Confirmed Cases	Cumulative Number of Deaths	Note
20-Jan	Cruise ship departs from Yokohama Japan			
25-Jan	80 year old passenger disembarks in Hong Kong			
1-Feb	80 year old passenger confirmed to have COVID-19			

	When results known, certificate of landing canceled and ship under quarantine. Tests for the virus would be administered to three groups: those with symptoms, those who got off in Hong Kong, and those who had close contact with the infected passenger.			
3-Feb	Ship arrives in port of Yokohama Japan			
5-Feb	10 passengers and crew confirmed +	10		
6-Feb	31 more passengers and crew confirmed +	41		
7-Feb	30 more passenger and crew confirmed +	61		
8-Feb	9 more passenger and crew confirmed +	70		
10-Feb	66 more passenger and crew confirmed +	136		439 tes
11-Feb	39 more passenger and crew confirmed +	175		492 tes
12-Feb	28 more passenger and crew confirmed +	203		4 in IC
13-Feb	15 more passenger and crew confirmed +	218		713 tes
14-Feb	67 more passenger and crew confirmed +	285		927 tes
15-Feb	70 more passenger and crew confirmed +	355		1,211 tested; asymptomatic
16-Feb	329 American evacuated from cruise ship (14 of the evacuees found to be +) 61 Americans remained on board 44 Americans remained hospitalized in Japan	369		
17-Feb	85 more passenger and crew confirmed +	454		1,721 tested; serious
18-Feb	167 more passenger and crew confirmed +	621		3,011 te
19-Feb	2 deaths	621	2	
20-Feb	13 more passenger and crew confirmed +	634	2	3,061 tested; seriously ill asymptomatic
23-Feb	Death reported in Japan		3	
24-Feb	Japan updates total to 691; US reports 36 in US	691	3	
25-Feb	Death reported in Japan; US reports 40 in US; UK 4; Australia 7; Hong Kong 4; Israel 2; Total 744; plus 4 not on ship	734	4	3,891 tested; seriously ill asymptomatic

26-Feb	US reports total of 42 cases in US; Japan announces that 45 of 813 former passengers have symptoms and will need to be tested; 14 new cases confirmed in the Diamond Princess cruise ship, raising the total to 705 cases inside the ship	750	4	
27-Feb	Australia (+1) 8 cases (repatriated)	751	4	
28-Feb	2 death reported in Japan	751	6	

As a check on deaths, I applied the age specific death rates per 100,000 population for the entire veteran population of 19M (90% male)

AGE	2019 VetPop	2017 Male All Cause Mortality per 100,000	Estimated 2017 All Cause Deaths
20 to 24 years	262,415	137.9	362
25 to 29 years	670,058	171.3	1,148
30 to 34 years	933,598	196.3	1,833
35 to 39 years	1,055,447	227.1	2,397
40 to 44 years	1,004,755	273.6	2,749
45 to 49 years	1,189,750	387.3	4,608
50 to 54 years	1,457,440	604.4	8,809
55 to 59 years	1,712,347	919.5	15,745
60 to 64 years	1,867,136	1,328.3	24,801
65 to 69 years	1,868,263	1,831.8	34,223
70 to 74 years	2,703,684	2,668.0	72,134
75 to 79 years	1,701,867	4,193.7	71,371
80 to 84 years	1,187,331	6,901.6	81,945
85 years and over	1,595,611	14,689.2	234,383
Total population	19,209,704	863.8	556,507

Sent from [Mail \[go.microsoft.com\]](mailto:Mail [go.microsoft.com]) for Windows 10

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The information in this e-mail may be privileged and confidential, intended only for the use of the addressee(s) above. Any unauthorized use or disclosure of this information is prohibited. If you have received this e-mail by mistake, please delete it and immediately contact the sender.

Sender:	Kadlec, Robert (OS/ASPR/IO) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A182EDA693D040D3832BAE6EFCF7A255-KADLEC, ROB>
Recipient:	Caneva, Duane <(b)(6)>@hq.dhs.gov>
Sent Date:	2020/03/01 18:19:08
Delivered Date:	2020/03/01 18:19:00

From:	White House: Office of the Vice President <info@mail.whitehouse.gov>
To:	Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd. (FYDIBOHF23SPDLT)/cn=Recipients/cn=d145efc9c35c4865aca6e9d47786b204-Harrison, B>
Subject:	Readout from the White House Coronavirus Task Force Meeting
Date:	2020/03/01 18:54:39
Priority:	Normal
Type:	Note

-->



The White House

Office of the Vice President

FOR IMMEDIATE RELEASE

March 1, 2020

READOUT FROM WHITE HOUSE CORONAVIRUS TASK FORCE MEETING

Vice President Mike Pence today convened a regularly scheduled White House Coronavirus Task Force meeting via phone at 4:00 pm EST.

U.S. Department of Health and Human Services (HHS) Secretary Alex Azar and Centers for Disease Control (CDC) and Prevention Director Dr. Robert Redfield provided the latest update on the Coronavirus including the actions taken to implement the announcement yesterday from President Donald Trump. Deputy Secretary of State Stephen Biegun discussed the measures taken for screening of outbound passengers from Italy, South Korea, Iran, and China in addition to the assistance provided to State and local

communities by the CDC.

Dr. Stephen Hahn, Commissioner of Food and Drugs, also announced that—based on the expansive, proactive, and comprehensive outreach to manufacturers—there are no additional drug shortages beyond the one reported last week. It was noted that only 20 drugs are sole-sourced from China.

###

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The White House · 1600 Pennsylvania Ave NW · Washington, DC 20500-0003 · USA · 202-456-1111

Sender:	White House: Office of the Vice President <info@mail.whitehouse.gov>
Recipient:	Harrison, Brian (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d145efc9c35c4865aca6e9d47786b204-Harrison, B>
Sent Date:	2020/03/01 18:52:27
Delivered Date:	2020/03/01 18:54:39

From:	Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.ROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=FB2CC9052221421C8D5B7FD480F25BBE-BARTRUM, JO>
To:	Shuy, Bryan (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fdeb5ca04b6b4ed19fec2209b5f571e7-Shuy, Bryan>
CC:	Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>
Subject:	Re: New Antibiotics Language Proposed
Date:	2020/03/01 18:56:47
Priority:	Normal
Type:	Note

At least it is straight forward no year funds for a needed purpose.

On Mar 1, 2020, at 6:44 PM, Shuy, Bryan (OS/ASPR/IO) <Bryan.Shuy@hhs.gov>wrote:

Fun one that just came through

Sent from my iPhone

Begin forwarded message:

From: "Reczek, Jeff (Appropriations)" <Jeff_Reczek@appro.senate.gov>
Date: March 1, 2020 at 6:32:26 PM EST
To: "'Shuy, Bryan (OS/ASPR/IO)'" <Bryan.Shuy@hhs.gov>
Subject: FW: New Antibiotics Language Proposed

From: Reczek, Jeff (Appropriations)
Sent: Sunday, March 1, 2020 6:32 PM
To: 'Shuy, Caitrin (HHS/ASFR)' <Caitrin.Shuy@hhs.gov>; Pinson, Alexander (HHS/ASFR) <Alexander.Pinson@hhs.gov>; Cash, Lester (HHS/ASFR) <Lester.Cash@HHS.GOV>; Cochran, Norris (HHS/ASFR) <norris.cochran@hhs.gov>
Cc: Friedel, Laura (Appropriations) <Laura_Friedel@appro.senate.gov>
Subject: New Antibiotics Language Proposed

All,

I am sorry to bug you once again. We just received the following from House leadership. Appreciate HHS perspective along with TA. I have no context for numbers (or anything else!). Like everything else we're doing, we would appreciate any comments back as soon as possible.

“() Addressing Antimicrobial Resistance and Development of Antibiotics. -- To the Secretary of Health and Human Services, \$1,144,500,000, to remain available until expended, funds to

address antimicrobial resistance. *Provided* that of such funds \$900,000,000 shall be made available to the Biomedical Advanced Research and Development Authority for expenses necessary to support advanced research, development, and purchase of broad spectrum antimicrobials, including those to treat secondary bacterial infections resulting from coronavirus infection; *Provided further*, that antimicrobial products supported or purchased with these funds shall be deemed to be security countermeasures under the Project BioShield Act of 2004; *Provided* that of such funds \$244,500,000 shall be made available to the Centers for Disease Control and Prevention to support detection, surveillance, containment, and prevention of resistant pathogens, including through antibiotic stewardship activities, in the United States and overseas.

Sender:	Bartrum, John (OS/ASPR) (CTR) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=FB2CC9052221421C8D5B7FD480F25BBE-BARTRUM, JO>
Recipient:	Shuy, Bryan (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fdeb5ca04b6b4ed19fec2209b5f571e7-Shuy, Bryan>; Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>
Sent Date:	2020/03/01 18:56:46
Delivered Date:	2020/03/01 18:56:47

To:	Marcozzi, David <(b)(6)@som.umaryland.edu>
Subject:	RE: VA Projections using Cruise Ship Data
Date:	2020/03/01 19:12:23
Priority:	Normal
Type:	Note

I will call the State Health Officer

From: Marcozzi, David <(b)(6)@som.umaryland.edu>
Sent: Sunday, March 1, 2020 7:08 PM
To: Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd. <(b)(6)@charter.net>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Lawler, James V <(b)(6)@unmc.edu>
Cc: Caneva, Duane (DHS.GOV) <(b)(6)@hq.dhs.gov>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Call the GOV. Tell them they are Philadelphia.

From: Robert Kadlec <Robert.Kadlec@hhs.gov>
Date: Sunday, March 1, 2020 at 19:06
To: David Marcozzi <(b)(6)@som.umaryland.edu>, Carter Mecher <(b)(6)@charter.net>, <(b)(6)@mgh.harvard.edu> <(b)(6)@mgh.harvard.edu>, James Lawler <(b)(6)@unmc.edu>
Cc: Duane Caneva <(b)(6)@hq.dhs.gov>, "Dean, Charity A@CDPH" <Charity.Dean@cdph.ca.gov>, Richard Hatchett <richard.hatchett@cepi.net>, "matthew.hepburn" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Ha good luck CDC briefed that they were going to recommend layered approaches measured to the blah blah blah . Look out

From: Marcozzi, David <(b)(6)@som.umaryland.edu>
Sent: Sunday, March 1, 2020 6:45 PM
To: Carter Mecher <(b)(6)@charter.net>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Lawler, James V <(b)(6)@unmc.edu>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>
Cc: Caneva, Duane (DHS.GOV) <(b)(6)@hq.dhs.gov>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Some one nudge, push or mandate Seattle.

From: Carter Mecher <(b)(6)@charter.net>
Date: Sunday, March 1, 2020 at 16:01
To: "(b)(6)@mgh.harvard.edu" <(b)(6)@mgh.harvard.edu>, James Lawler <(b)(6)@unmc.edu>, Robert Kadlec <Robert.Kadlec@hhs.gov>
Cc: Duane Caneva <(b)(6)@hq.dhs.gov>, "Dean, Charity A@CDPH" <Charity.Dean@cdph.ca.gov>, David Marcozzi <(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Seattle now has 1 death and 2 patients in critical condition. Are they planning on taking any actions? NPIs?

I think we have more than hundreds of cases in the community (would add another zero). This is what Italy felt like.

Sent from [Mail](#) for Windows 10

From: Callahan, Michael V., M.D.
Sent: Sunday, March 1, 2020 12:31 PM
To: Lawler, James V; Kadlec, Robert (OS/ASPR/IO); Carter Mecher; Callahan, Michael V., M.D.
Cc: Caneva, Duane (DHS.GOV); Dean, Charity A@CDPH; Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Tom Bossert
Subject: Re: VA Projections using Cruise Ship Data

We briefed this at ASPR. There are slides from HK MOH shared with BARDA regarding where to put MCM investments (NPI, vs. vaccine vs biologics).

In that data, HK MOH and Guam Le, of SARS fame, reported the following for only Jan 1 - Feb 1:

1. • Current A/influenza and lower levels of B/influenza-as shown by respiratory viral panel and rapid A/flu tests did not deviate from influenza reporting seen in Guangdong or Nanjing and were slightly **higher** than 2018-19 transmission season
2. • COVID19 levels rose steadily during the Jan 15-Feb 1 date. These cases were **additive** to to MGH partner hospitals: Queen Mary, Hong Kong Adventists, Baptist and Gleneagle hospitals. The numbers do not include co-infection with flu, and do not include secondary risk factors (age, CKI, COPD, Diabetes or use of DMARDS/biologics_)
3. • Hong Kong is a great model for US, as bed count is close to CONUS Cities, demographics include significant middle income demographics and a community sector that is avoidant of central authority (Beijing).

Summary from that data: C19 appears to be additive to burden of ILI in HK, that these cases did not look at coinfection (and thus might be overstating severity).

I would suggest we **re-convene** the webex with **Guam Li**/HK MOH so we do not have to wait for the Feb 29 data. It would be most helpful to have others on this threat also hear this information.

This can be done under MITRE, RM, MGH or under the ASPR.

Added point: Hong Kong MOH was important at notifying friendly nations (Singapore, Canada) of inbound travelers from region who transitted via HKG (HK Intn. Airport) enroute to other sites. This information was not shared with CDC .

From: Lawler, James V <(b)(6)@unmc.edu>
Sent: Sunday, March 1, 2020 12:09 PM
To: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Carter Mecher <(b)(6)@charter.net>
Cc: Caneva, Duane (DHS.GOV) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>; Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

External Email - Use Caution

Interesting question. I think that flu is on downturn by itself. The more dramatic differential in week 8 could reflect –

1. Normal variation that occurs outside peak flu times, that lots of other resp viruses circulate
2. COVID predominance in ILI now that it is taking off and flu is on decline.

Given the ILI rate now double what lab confirmed flu %positive rate, that seems like a significant change.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>
Date: Sunday, March 1, 2020 at 11:03 AM
To: Carter Mecher <(b)(6)@charter.net>
Cc: "Lawler, James V" <(b)(6)@unmc.edu>, "Caneva, Duane (DHS.GOV)"

(b)(6)@hq.dhs.gov>, "Callahan, m." (b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <charity.dean@cdph.ca.gov>, "Marcozzi, David" (b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert (b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Is it your judgement that COVID is pushingcrowding Influenza out?

Sent from my iPhone

On Mar 1, 2020, at 10:08 AM, Carter Mecher (b)(6)@charter.net>wrote:

Was able to find South Korea flu surveillance.

<https://www.cdc.go.kr/board/board.es?mid=a30504000000&bid=0033> [cdc.go.kr]

I pulled the data for weeks 49-8 (it doesn't look like ILI is much help).

Week	ILI Rate	%Positive Samples for Influenza
49	19.5%	18.6%
50	28.5%	16.2%
51	37.8%	25.9%
52	49.8%	35.1%
1	49.1%	43.4%
2	47.8%	40.6%
3	42.4%	37.6%
4	40.9%	43.4%
5	28.0%	40.9%
6	16.4%	16.7%
7	11.6%	15.8%
8	8.5%	3.9%

<6ECD810E8CEE448097E96CCC06727521.png>

Sent from Mail [protect2.fireeye.com] for Windows 10

From: Lawler, James V

Sent: Sunday, March 1, 2020 8:43 AM

To: Kadlec, Robert (OS/ASPR/IO); Carter Mecher; Caneva, Duane (DHS.GOV); Callahan, Michael V.,M.D.; Dean, Charity A@CDPH

Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

As Carter points out, Wuhan and other cities started way too late.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation
Global Center for Health Security, and
Associate Professor of Medicine
Division of Infectious Diseases
University of Nebraska Medical Center
m: (b)(6)

(b)(6)@unmc.edu

<8652377C655D4CE6946BE0A9C3B0144B.png>

From: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>

Sent: Sunday, March 1, 2020 7:25:22 AM

To: Carter Mecher <(b)(6)@charter.net>; Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV [dhs.gov]) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D.

<(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>

Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert

<(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Here is something to ponder from the China CDC report from a couple of days ago.

“A main finding of this characterization and exploratory analysis of the first 72,314 cases of COVID-19 found in China in the 40 days between first recognition of the outbreak of pneumonia with unknown etiology on December 31, 2019 to the end of the study period on February 11, 2020 is that this novel coronavirus is highly contagious. It has spread extremely rapidly from a single city to the entire country within only about 30 days. Moreover, it has achieved such far-reaching effects even in the face of extreme response measures including the complete shutdown and isolation of whole cities, cancellation of Chinese New Year celebrations, prohibition of attendance at school and work, massive mobilization of health and public health personnel as well as military medical units, and rapid construction of entire hospitals.”

From: Carter Mecher <(b)(6)@charter.net>

Sent: Sunday, March 1, 2020 7:58 AM

To: Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV [dhs.gov])

<(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>

Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

James said something to me that I do want to frame on the good wall (not the bad wall of understatements).

He gave a presentation to education leaders and I'm paraphrasing: With pandemic flu we would close the schools to protect the kids and reduce community transmission. With COVID we would close the schools (not so much to protect the kids), but to reduce community transmission and protect their grandparents.

James can phrase it better than I can—but that is the message. Tom are you listening?

Sent from Mail [protect2.fireeye.com] [protect2.fireeye.com] for Windows 10

From: Lawler, James V
Sent: Sunday, March 1, 2020 7:41 AM
To: Carter Mecher; Caneva, Duane; Callahan, Michael V., M.D.; Dean, Charity A@CDPH
Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Kadlec, Robert (OS/ASPR/IO); Tom Bossert
Subject: Re: VA Projections using Cruise Ship Data

Listening to CNN "experts" this morning. They have no clue what they are talking about – saying that young people really shouldn't worry and older/vulnerable folks are the only ones that should be changing behavior. No concept that our elders are depending on the actions of the entire community and also that once the healthcare system collapses, all of the services for which younger folks access that system will be gone as well. We have to get out in front of messaging.

James Lawler, MD, MPH, FIDSA

m:(b)(6)

(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>
Date: Sunday, March 1, 2020 at 6:20 AM
To: "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Lawler, James V" <(b)(6)@unmc.edu>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <charity.dean@cdph.ca.gov>
Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Also have been thinking more about thresholds for pulling triggers.

I thought a but more about what James said about true prevalence—that it would be at least twice as high as we currently think it is on the cruise ship. That would mean that true attack rate is closer to 40%, 80% of cases are asymptomatic, 6% of cases are hospitalized, 1% are critical (in ICU), and CFR is about 0.5%. But given the demographics of the cruise ship we are really the diluting effect of kids and young adults. They would be expected to have high attack rates and even higher rates of asymptomatic disease and mild disease (pushing up the % asymptomatics, reducing the overall hospitalization rate, ICU rate and CFR). So wanted to play with those estimates of thresholds again (will resend updated math).

Yesterday I was at my daughter's house helping them pull out vines that were planted as ground cover. The damn things grow everywhere, climbing up trees and smothering them (this isn't kudzu). My wife said something about these vines that made me think of what we are seeing in South Korea, Italy and now the US. When you plant these vines, they go thru 3 stages—sleep, creep, and leap. First year they don't seem to be doing much—they sleep (but they are laying down a root system that you cannot see). The next year they creep (seeing some spread above ground while the root system hidden from view continues to spread). And the next year they leap (the vines seem to explode everywhere you look).

That is exactly what Italy feels like (but speeded up). We are blind to what is “happening underground.” The root system is really those dendrite transmission trees that Richard likes. I pulled out the Singapore graphic again of their contact tracing of cases (that is the root system). They have given up continuing to update that graphic and only providing linkages between cases when they provide brief summaries of individual cases. Probably getting to complex to show.

<image001.png>

In the US we just pulled up three random roots that are far from any plants we can see above the surface. My concern is that we are at the cusp of “leap” and cases are going to start popping like popcorn wherever we look.

This gets to the timing of NPIs

I went back to the Philadelphia-St Louis comparison of 1918. The difference between Philadelphia and St. Louis in 1918 in terms when they pulled the trigger on NPIs was about two weeks during the course of their individual outbreaks. In St. Louis, NPIs were put in place 1 week after the first cases at Jefferson Barracks, 5 days after the first death, and 3 days after the first civilian cases in St. Louis. In Philadelphia, NPIs were put in place 3 weeks after the first cases at the Navy Yard, 16 days after the first civilian cases in Philadelphia, 2 weeks after the first death.

We would estimate that the outbreak in Wuhan had about a 2 week head start on the rest of Hubei. So the measures China implemented to slow transmission happened about two later in the course of the outbreak in Wuhan compared to the rest of Hubei Province. A comparison of hospitalization rate looks a lot like Philadelphia and St. Louis.

Hong Kong confirmed its first case of a traveler from Wuhan on Jan 23 (symptom onset of Jan 18). They would later learn of their first case of local transmission with symptom onset on Jan 22. On Jan 25, within 1 week of the symptom onset of the first case of a traveler and within 3 days of symptom onset

of the first local case, they were already taking actions like suspending the reopening of schools—they were a bit lucky because the schools were closed for the Chinese New Year. So they took aggressive actions within 1 week of first recognized case. There was a lot of activity in Hong Kong in the first 3 weeks of January (large number of suspected cases that they were monitoring but they were only had syndromic surveillance since there were no diagnostics early on. So Hong Kong had been busy isolating scores of patients during the first 3 weeks of January based only on clinical presentation.

Singapore confirmed its first case on January 23 (traveler from Wuhan). The individual had symptom onset on Jan 20 on a flight to Singapore. On Feb 3, Singapore confirmed its first case of local transmission. Symptom onset for that individual was on Jan 29. On Feb 7, Singapore identified additional cases of local transmission and declared Code Orange and intensifies response. So Singapore takes aggressive action two weeks after confirmation of 1st case in a traveler and within 4 days of first case of local transmission.

Sent from Mail [go.microsoft.com] [protect2.fireeye.com] [protect2.fireeye.com] for Windows 10

From: [Carter Mecher](#)

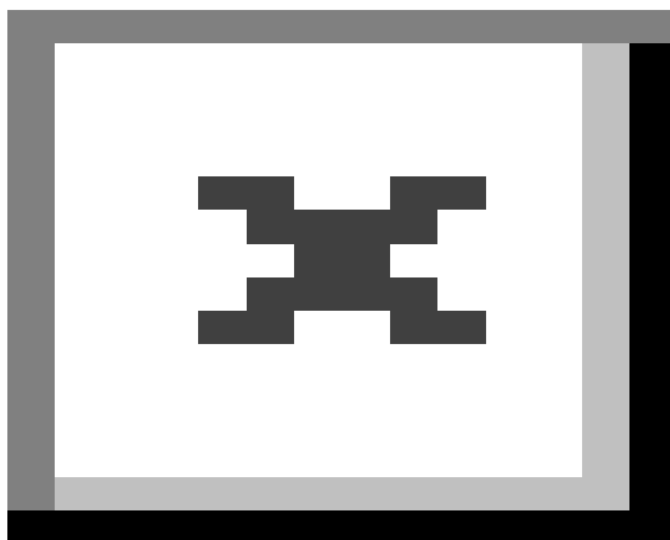
Sent: Sunday, March 1, 2020 5:58 AM

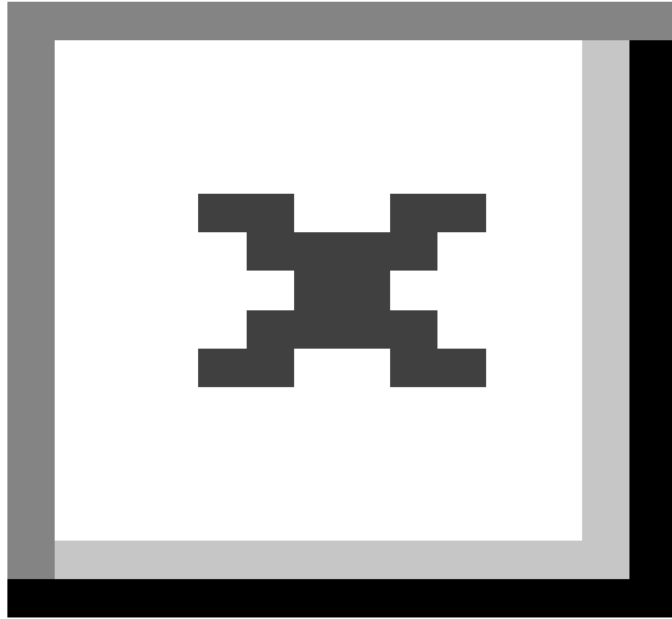
To: [Caneva, Duane](#); [Lawler, James V](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: RE: VA Projections using Cruise Ship Data

A few things for the group. Have been interested in whether we can see anything happening with flu surveillance (especially ILI) in places with COVID outbreaks, Am interested in looking at Japan, Hong Kong, Singapore, and Italy. So far, only found Hong Kong (Eva Lee found it). I will keep looking—really interested in South Korea and Italy to get a better sense of whether looking st ILI will be of any value. https://www.chp.gov.hk/files/pdf/fluexpress_week8_27_2_2020_eng.pdf [[chp.gov.hk](https://protect2.fireeye.com)] [protect2.fireeye.com] [protect2.fireeye.com] This is data thru Feb 22 (week 8). Hong Kong is really do a good job of surveillance. And what they are doing in terms of NPIs seems to be working (just like Singapore).





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From: [Caneva, Duane](#)

Sent: Saturday, February 29, 2020 11:18 PM

To: [Lawler, James V](#); [Carter Mecher](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: Re: VA Projections using Cruise Ship Data

+ Charity

CA seems first up.

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From: Lawler, James V <(b)(6)@unmc.edu>
Sent: Saturday, February 29, 2020 11:06:20 PM
To: Carter Mecher <(b)(6)@charter.net>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>
Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

Math looks good, Carter. And your calculations are enlightening. I had thought that hospital and ICU surveillance would be too late, but if you can do 100% surveillance on SARI in ICUs, then you might be able to act in time. Assume ICU is 1/5th of severe cases requiring hospitalization, then you are looking at roughly 12 cases per million. Let's assume 50% ascertainment rate for ICU, so when you detect 5-6 ICU COVID per million, you have hit your trigger. This assumes homogeneous distribution in communities, which is probably not true. So we may need to focus on certain segments (people from Chinatown in NY who are expected to have closer links to travelers from outbreak areas early) and have lower trigger – first 1-2 cases.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>
Date: Saturday, February 29, 2020 at 6:53 PM
To: "Lawler, James V" <(b)(6)@unmc.edu>, "Callahan, m." <(b)(6)@mgh.harvard.edu>
Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Something I have been thinking about wrt thresholds for NPIs. We usually think of the window for implementing NPIs as before 1% prevalence. But this disease has more than 50% asymptomatics, so the threshold is really 0.5% prevalence of any symptoms (including very mild symptoms). But CDC criteria for testing is severe disease. Let's say that 5% of those who are infected have severe disease, that means our threshold is 1%*5% = 0.05%. But it takes 2 weeks or so before a patient who is infected

becomes seriously ill. Over the span of 2 weeks plus the lag time for testing, the outbreak could have had at least 3 doublings (so an 8-fold increase). That may be conservative. So we are really talking about a threshold of close to $0.05\%/8 = 0.00625\%$. For a city of 1 M, that is 62 serious cases, 625 symptomatic, 1,250 infected. In 2 weeks, these numbers could be 500 serious, 5,000 symptomatic, 10,000 infected (the 1% threshold). Once you are there, the window is closed. If we assume a 3 week lag from infection onset to death, the number of deaths would be based on a denominator of 3 weeks ago, so divide 1,250 infected by roughly 3 (assume cases triple in a week), to get 400. Assume a CFR of 0.8%, so about 3 deaths. More than 3 deaths per million population is probably too late. Somebody could check my math.

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From: Lawler, James V

Sent: Saturday, February 29, 2020 5:31 PM

To: Callahan, Michael V., M.D.

Cc: Marcozzi, David; Carter Mecher; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Caneva, Duane; Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

Agree. We have set our d/c criteria for persons in isolation (documented infection) at improved sx's, afebrile x48 hrs (off antipyretics) and swab neg X3 24 hrs apart.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Callahan, m." (b)(6)@mgh.harvard.edu>

Date: Saturday, February 29, 2020 at 2:39 PM

To: "Lawler, James V" (b)(6)@unmc.edu>

Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu>, Carter Mecher

(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane"

(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert (b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Not great.....Better than poorly performed Induced sputum for AFB !

James, results from a 3rd Deep nasal swab could help us establish a viable protocol my 2 cents.

Michael Callahan MD MSPH DTM&H, DMCC (UK)

Director, Mass-Casualty Infection Operations

Vaccine & Immunotherapy Center

Massachusetts General Hospital

Boston, MA

Special Advisor to the Assistant Secretary of Public Health Preparedness and Response
U.S Dept of Health and Human Services
O'Neil Building 6th Floor
Washington, DC

On Feb 29, 2020, at 05:35, Lawler, James V <(b)(6)@unmc.edu> wrote:

External Email - Use Caution

NP x2 = 75% sensitivity, if my probability skilz are correct.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Marcozzi, David" <(b)(6)@som.umaryland.edu>

Date: Saturday, February 29, 2020 at 5:11 AM

To: "Lawler, James V" <(b)(6)@unmc.edu>, Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Wow, NP still misses 50%?

Can we assume this increase in magnitude (x2-3) for anyplace doing testing with NP? How much more sensitive with NP x2? That is what we do at Maryland.

Respectfully,

David Marcozzi, MD, MHS-CL, FACEP

Associate Professor

Associate Chair of Population Health

Department of Emergency Medicine

University of Maryland School of Medicine

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Take time to deliberate; but when the time for action arrives, stop thinking and go in.
President Andrew Jackson

From: James Lawler <(b)(6)@unmc.edu>
Date: Friday, February 28, 2020 at 19:57
To: Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, David Marcozzi <(b)(6)@som.umaryland.edu>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Duane Caneva <(b)(6)@hq.dhs.gov>, Robert Kadlec <Robert.Kadlec@hhs.gov>, "(b)(6)@mgh.harvard.edu" <(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Interestingly Japanese health folks only did OP swabs x1. NP swabs are much more sensitive. OP for us about half as sensitive (or less). NP already misses 50% with a single swab. So would probably multiply Japanese swab + by 2-3 to get true infection rate.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation
Global Center for Health Security, and
Associate Professor of Medicine
Division of Infectious Diseases
University of Nebraska Medical Center
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(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>
Sent: Friday, February 28, 2020 3:06:10 PM
To: Richard Hatchett <richard.hatchett@cepi.net>; Lawler, James V <(b)(6)@unmc.edu>; Marcozzi, David <(b)(6)@som.umaryland.edu>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Tom Bossert <(b)(6)@me.com>
Subject: VA Projections using Cruise Ship Data

Non-UNMC email

I wanted to bounce this around the smaller group of wolverines. I also pulled the numbers of deaths annually in veterans and estimated deaths for all 19 M veterans using age specific death rates for males. The interesting thing is that the numbers of projected deaths related to COVID are actually pretty small compared to what we normally see for veterans. The challenge will be the amount of acute care—especially ICU care. The only chance that VA has is that we can knock down the attack rate thru TLC. The demand for acute care is overwhelming. The system would collapse under that level of demand.

Estimates of the impact of COVID on VA

In FY2019, VA cared for 6,271,019 unique veterans and had 9,237,638 veteran enrollees.

The Diamond Princess cruise ship outbreak can provide invaluable insights into the potential impact to VA.

Below is a comparison of the US population, the adult population aboard the cruise ship, and the Veteran population.

AGE	US Population 2017	% Distribution	Cruise Ship Passengers & Crew	% Distribution	FY2019 Veterans Vet Pop	% Distribution
20-29 years	45,489,095	19%	347	9%	932,473	5%
30-39 years	43,204,209	18%	428	12%	1,989,045	10%
40-49 years	40,617,231	17%	334	9%	2,194,505	11%
50-59 years	43,409,050	18%	398	11%	3,169,787	17%
60-69 years	36,824,083	15%	923	25%	3,735,399	19%
70-79 years	21,588,326	9%	1,015	27%	4,405,551	23%
>80 years	12,433,972	5%	227	6%	2,782,943	14%

Total population	243,565,966	100%	3,672	100%	19,209,704	100%
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The Veteran population is similar to the Diamond Princess cruise ship population. If anything, the veteran population is even older (so at even higher risk). There were 3,711 passengers and crew aboard the crew ship (1,045 crew and 2,666 passengers). As of February 28, 2020, there have been 751 confirmed cases of COVID (attack rate of 20%). There have been 6 deaths thus far (lower limit of a case fatality rate of 0.80%). [A timeline of the outbreak is provided at the bottom of this message.] 380 of the confirmed cases were asymptomatic (50.6%). It is estimated that approximately 12-15% of the 751 passengers and crew with confirmed disease required acute care with 36 hospitalized patients reported to be in serious condition (5%). We looked at a range of ICU admissions (2%-5% of those who become infected).

Given the similarities of the demographics of the cruise ship and veterans, we could project the potential impact on veterans.

Veterans	Population FY2019	Total Infected (20% AR)	Number Asymptomatic (50.6%)	Hospitalizations 12%	ICU Admissions 2%	ICU Admissions 5%	Deaths CFR 0.80%
All Veterans	19,209,704	3,841,941	1,944,022	461,033	76,839	192,097	30,736
Veteran Enrollees	9,237,638	1,847,528	934,849	221,703	36,951	92,376	14,780
Veteran Uniques	6,271,019	1,254,204	634,627	150,504	25,084	62,710	10,034

Need to place these numbers into perspective.

Acute Inpatient Care	VHA Total
Operating Beds Hospital	15,744
Operating Beds Medicine/Surgery	9,817
Operating Beds ICU	1,692
ADC Hospital	9,805
ADC Medicine/Surgery	6,225
ADC ICU	1,101
ADC On a Ventilator	240
Daily Hospital Admissions	1,641
Daily Admissions Medicine/Surgery	1,226
Daily Admissions/Transfers in ICU	389
Emergency Department Care	
Daily ER Visits	6,874
Outpatient Care (non-ER)	
Daily Clinic Visits	209,336

The estimated number of deaths for all 19 M veterans is ~556,000. The number of annual deaths of veteran enrollees in FY2019 was 350,737. The projected number of COVID deaths for veterans is 14,780

The number of veterans who had an acute care hospitalization in FY2019 and died at any time during FY2019 was 62,375. The number of COVID deaths projected in veteran uniques (users) is 10,034.

Annually, VA has:

- 600,000 acute (medical/surgical) admissions
- 140,000 ICU admissions
- 2.5M ER/Urgent Care visits

If we assume that this outbreak will last approximately 3 months, we can then overlay the projected demand upon the usual background utilization over 3 months.

Even if we simply focus on the veteran uniques (veterans who used VA services and not enrollees), the numbers are a little overwhelming. We assumed that there might be 3 ER visits for each admission--so roughly 450,000 ER visits, 150,000 hospitalizations, and 25,000-63,000 ICU admissions.

Over an average 3-month period, VA would have ~625,000 ER/Urgent care visits, 150,000 acute care admissions, and 35,000 ICU admissions.

We assumed that acutely ill COVID patients will have long lengths of stay (14-21 days). If VA needs to absorb 150,000 hospitalizations (each with a LOS of 14-21 days), it would require 2.1 M to 3.2 M BDOCs.

If we assumed 14 day LOS for each ICU admission, 25,000-63,000 ICU admissions would equate to 350,000-882,000 ICU BDOCs.

The VA has 15,744 hospital operational beds (runs an ADC of only 9,805). Even if VA mobilized all those potential beds (15,744), for 3 months (90 days), we would generate the capacity for 1.4 M BDOCs.

Demand for care would exceed capacity by 700K BDOCs for a 14 day LOS and 1.7M BDOCs for a LOS of 21 days (1.5-2.2 times maximum capacity).

The VA has 1,692 ICU beds (runs an ADC of 1,101). Mobilizing all 1,692 ICU beds for 3 months (90 days), we would generate 152,000 BDOCs. Demand for ICU care would exceed capacity by 200,000-730,000 ICU BDOCs (2-5 times existing capacity).

This demand for care would not be constant across the 3 month period. The demand would rise exponentially, plateau, and then fall. The real concern is what will happen during the peak period of the epidemic.

VA does not have enough capacity to meet this demand, even if it mobilized every potential hospital bed to care for COVID patients (and there would be no capacity to care for usual demand for non-COVID acute care). And all this will be happening with a VA workforce that will be significantly diminished due to illness, home isolation, home quarantine and childminding responsibilities related to closure of schools and daycare, and fear.

Timeline of Diamond Princess cruise ship outbreak

Date	Event	Cumulative Number of Confirmed Cases	Cumulative Number of Deaths	Note
------	-------	--------------------------------------	-----------------------------	------

20-Jan	Cruise ship departs from Yokohama Japan			
25-Jan	80 year old passenger disembarks in Hong Kong			
1-Feb	80 year old passenger confirmed to have COVID-19			
	When results known, certificate of landing canceled and ship under quarantine. Tests for the virus would be administered to three groups: those with symptoms, those who got off in Hong Kong, and those who had close contact with the infected passenger.			
3-Feb	Ship arrives in port of Yokohama Japan			
5-Feb	10 passengers and crew confirmed +	10		
6-Feb	31 more passengers and crew confirmed +	41		
7-Feb	30 more passenger and crew confirmed +	61		
8-Feb	9 more passenger and crew confirmed +	70		
10-Feb	66 more passenger and crew confirmed +	136		439 tes
11-Feb	39 more passenger and crew confirmed +	175		492 tes
12-Feb	28 more passenger and crew confirmed +	203		4 in IC
13-Feb	15 more passenger and crew confirmed +	218		713 tes
14-Feb	67 more passenger and crew confirmed +	285		927 tes
15-Feb	70 more passenger and crew confirmed +	355		1,211 tested; asymptomatic
16-Feb	329 American evacuated from cruise ship (14 of the evacuees found to be +) 61 Americans remained on board 44 Americans remained hospitalized in Japan	369		
17-Feb	85 more passenger and crew confirmed +	454		1,721 tested; serious
18-Feb	167 more passenger and crew confirmed +	621		3,011 te
19-Feb	2 deaths	621	2	
20-Feb	13 more passenger and crew confirmed +	634	2	3,066 tested; seriously ill asymptomatic
23-Feb	Death reported in Japan		3	
24-Feb	Japan updates total to 691; US reports 36 in US	691	3	

25-Feb	Death reported in Japan; US reports 40 in US; UK 4; Australia 7; Hong Kong 4; Israel 2; Total 744; plus 4 not on ship	734	4	3,89 tested; seriously ill asymptomatic
26-Feb	US reports total of 42 cases in US; Japan announces that 45 of 813 former passengers have symptoms and will need to be tested; 14 new cases confirmed in the Diamond Princess cruise ship, raising the total to 705 cases inside the ship	750	4	
27-Feb	Australia (+1) 8 cases (repatriated)	751	4	
28-Feb	2 death reported in Japan	751	6	

As a check on deaths, I applied the age specific death rates per 100,000 population for the entire veteran population of 19M (90% male)

AGE	2019 VetPop	2017 Male All Cause Mortality per 100,000	Estimated 2017 All Cause Deaths
20 to 24 years	262,415	137.9	362
25 to 29 years	670,058	171.3	1,148
30 to 34 years	933,598	196.3	1,833
35 to 39 years	1,055,447	227.1	2,397
40 to 44 years	1,004,755	273.6	2,749
45 to 49 years	1,189,750	387.3	4,608
50 to 54 years	1,457,440	604.4	8,809
55 to 59 years	1,712,347	919.5	15,745
60 to 64 years	1,867,136	1,328.3	24,801
65 to 69 years	1,868,263	1,831.8	34,223
70 to 74 years	2,703,684	2,668.0	72,134
75 to 79 years	1,701,867	4,193.7	71,371
80 to 84 years	1,187,331	6,901.6	81,945
85 years and over	1,595,611	14,689.2	234,383
Total population	19,209,704	863.8	556,507

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Recipient:	Marcozzi, David (b)(6)@som.umaryland.edu>
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To:	Marcozzi, David <(b)(6)@som.umaryland.edu>
Subject:	RE: VA Projections using Cruise Ship Data
Date:	2020/03/01 19:15:00
Priority:	Normal
Type:	Note

I will call the State Health Officer . Spoke to him and his colleagues at ASTHO and NACCHO. Told him and lal of them if they wait or hesitate this virus will surround them they had to act fast and anticipate. That is not what CDC is advising.

From: Marcozzi, David <(b)(6)@som.umaryland.edu>
Sent: Sunday, March 1, 2020 7:08 PM
To: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Carter Mecher <(b)(6)@charter.net>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Lawler, James V <(b)(6)@unmc.edu>
Cc: Caneva, Duane (DHS.GOV) <(b)(6)@hq.dhs.gov>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Call the GOV. Tell them they are Philadelphia.

From: Robert Kadlec <Robert.Kadlec@hhs.gov>
Date: Sunday, March 1, 2020 at 19:06
To: David Marcozzi <(b)(6)@som.umaryland.edu>, Carter Mecher <(b)(6)@charter.net>, <(b)(6)@mgh.harvard.edu> <(b)(6)@mgh.harvard.edu>, James Lawler <(b)(6)@unmc.edu>
Cc: Duane Caneva <(b)(6)@hq.dhs.gov>, "Dean, Charity A@CDPH" <Charity.Dean@cdph.ca.gov>, Richard Hatchett <richard.hatchett@cepi.net>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Ha good luck CDC briefed that they were going to recommend layered approaches measured to the blah blah blah . Look out

From: Marcozzi, David <(b)(6)@som.umaryland.edu>
Sent: Sunday, March 1, 2020 6:45 PM
To: Carter Mecher <(b)(6)@charter.net>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Lawler, James V <(b)(6)@unmc.edu>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>
Cc: Caneva, Duane (DHS.GOV) <(b)(6)@hq.dhs.gov>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV

USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Some one nudge, push or mandate Seattle.

From: Carter Mecher <(b)(6)@charter.net>
Date: Sunday, March 1, 2020 at 16:01
To: (b)(6)@mgh.harvard.edu" <(b)(6)@mgh.harvard.edu>, James Lawler <(b)(6)@unmc.edu>, Robert Kadlec <Robert.Kadlec@hhs.gov>
Cc: Duane Caneva <(b)(6)@hq.dhs.gov>, "Dean, Charity A@CDPH" <Charity.Dean@cdph.ca.gov>, David Marcozzi <(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Seattle now has 1 death and 2 patients in critical condition. Are they planning on taking any actions? NPIs?

I think we have more than hundreds of cases in the community (would add another zero). This is what Italy felt like.

Sent from Mail for Windows 10

From: Callahan, Michael V.,M.D.
Sent: Sunday, March 1, 2020 12:31 PM
To: Lawler, James V; Kadlec, Robert (OS/ASPR/IO); Carter Mecher; Callahan, Michael V.,M.D.
Cc: Caneva, Duane (DHS.GOV); Dean, Charity A@CDPH; Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Tom Bossert
Subject: Re: VA Projections using Cruise Ship Data

We briefed this at ASPR. There are slides from HK MOH shared with BARDA regarding where to put MCM investments (NPI, vs. vaccine vs biologics).

In that data, HK MOH and Guam Le, of SARS fame, reported the following for only Jan 1 - Feb 1:

1. • Current A/influenza and lower levels of B/influenza-as shown by respiratory viral panel and rapid A/flu tests did not deviate from influenza reporting seen in Guangdong or Nanjing and were slightly **higher** than 2018-19 transmission season
2. • COVID19 levels rose steadily during the Jan 15-Feb 1 date. These cases were **additive** to to MGH partner hospitals: Queen Mary, Hong Kong Adventists, Baptist and Gleneagle hospitals. The numbers do not include co-infection with flu, and do not include secondary risk factors (age, CKI, COPD, Diabetes or use of DMARDS/biologics_)

3. • Hong Kong is a great model for US, as bed count is close to CONUS Cities, demographics include significant middle income demographics and a community sector that is avoidant of central authority (Beijing).

Summary from that data: C19 appears to be additive to burden of ILI in HK, that these cases did not look at coinfection (and thus might be overstating severity).

I would suggest we **re-convene** the webex with **Guam Li**/HK MOH so we do not have to wait for the Feb 29 data. It would be most helpful to have others on this threat also hear this information.

This can be done under MITRE, RM, MGH or under the ASPR.

Added point: Hong Kong MOH was important at notifying friendly nations (Singapore, Canada) of inbound travelers from region who transitted via HKG (HK Intl. Airport) enroute to other sites. This information was not shared with CDC .

From: Lawler, James V <(b)(6)@unmc.edu>
Sent: Sunday, March 1, 2020 12:09 PM
To: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Carter Mecher <(b)(6)@charter.net>
Cc: Caneva, Duane (DHS.GOV) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>; Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

External Email - Use Caution

Interesting question. I think that flu is on downturn by itself. The more dramatic differential in week 8 could reflect –

1. Normal variation that occurs outside peak flu times, that lots of other resp viruses circulate
2. COVID predominance in ILI now that it is taking off and flu is on decline.

Given the ILI rate now double what lab confirmed flu %positive rate, that seems like a significant change.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>
Date: Sunday, March 1, 2020 at 11:03 AM
To: Carter Mecher <(b)(6)@charter.net>
Cc: "Lawler, James V" <(b)(6)@unmc.edu>, "Caneva, Duane (DHS.GOV)" <(b)(6)@hq.dhs.gov>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <charity.dean@cdph.ca.gov>, "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Is it your judgement that COVID is pushingcrowding Influenza out?

Sent from my iPhone

On Mar 1, 2020, at 10:08 AM, Carter Mecher <(b)(6)@charter.net>wrote:

Was able to find South Korea flu surveillance.

<https://www.cdc.go.kr/board/board.es?mid=a30504000000&bid=0033> [cdc.go.kr]

I pulled the data for weeks 49-8 (it doesn't look like ILI is much help).

Week	ILI Rate	%Positive Samples for Influenza
49	19.5%	18.6%
50	28.5%	16.2%
51	37.8%	25.9%
52	49.8%	35.1%
1	49.1%	43.4%
2	47.8%	40.6%
3	42.4%	37.6%
4	40.9%	43.4%
5	28.0%	40.9%
6	16.4%	16.7%
7	11.6%	15.8%
8	8.5%	3.9%

<6ECD810E8CEE448097E96CCC06727521.png>

Sent from Mail [protect2.fireeye.com] for Windows 10

From: Lawler, James V
Sent: Sunday, March 1, 2020 8:43 AM

To: Kadlec, Robert (OS/ASPR/IO); Carter Mecher; Caneva, Duane (DHS.GOV); Callahan, Michael V., M.D.; Dean, Charity A@CDPH
Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Tom Bossert
Subject: Re: VA Projections using Cruise Ship Data

As Carter points out, Wuhan and other cities started way too late.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation
Global Center for Health Security, and
Associate Professor of Medicine
Division of Infectious Diseases
University of Nebraska Medical Center
m: (b)(6)
(b)(6)@unmc.edu

<8652377C655D4CE6946BE0A9C3B0144B.png>

From: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>

Sent: Sunday, March 1, 2020 7:25:22 AM

To: Carter Mecher <(b)(6)@charter.net>; Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV [dhs.gov]) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>

Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Here is something to ponder from the China CDC report from a couple of days ago.

“A main finding of this characterization and exploratory analysis of the first 72,314 cases of COVID-19 found in China in the 40 days between first recognition of the outbreak of pneumonia with unknown etiology on December 31, 2019 to the end of the study period on February 11, 2020 is that this novel coronavirus is highly contagious. It has spread extremely rapidly from a single city to the entire country within only about 30 days. Moreover, it has achieved such far-reaching effects even in the face of extreme response measures including the complete shutdown and isolation of whole cities, cancellation of Chinese New Year celebrations, prohibition of attendance at school and work, massive mobilization of health and public health personnel as well as military medical units, and rapid construction of entire hospitals.”

From: Carter Mecher <(b)(6)@charter.net>
Sent: Sunday, March 1, 2020 7:58 AM
To: Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV [dhs.gov]) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>
Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

James said something to me that I do want to frame on the good wall (not the bad wall of understatements).

He gave a presentation to education leaders and I'm paraphrasing: With pandemic flu we would close the schools to protect the kids and reduce community transmission. With COVID we would close the schools (not so much to protect the kids), but to reduce community transmission and protect their grandparents.

James can phrase it better than I can—but that is the message. Tom are you listening?

Sent from Mail [protect2.fireeye.com] [protect2.fireeye.com] for Windows 10

From: Lawler, James V
Sent: Sunday, March 1, 2020 7:41 AM
To: Carter Mecher; Caneva, Duane; Callahan, Michael V., M.D.; Dean, Charity A@CDPH
Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Kadlec, Robert (OS/ASPR/IO); Tom Bossert
Subject: Re: VA Projections using Cruise Ship Data

Listening to CNN "experts" this morning. They have no clue what they are talking about – saying that young people really shouldn't worry and older/vulnerable folks are the only ones that should be changing behavior. No concept that our elders are depending on the actions of the entire community and also that once the healthcare system collapses, all of the services for which younger folks access that system will be gone as well. We have to get out in front of messaging.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>
Date: Sunday, March 1, 2020 at 6:20 AM
To: "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Lawler, James V" <(b)(6)@unmc.edu>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <charity.dean@cdph.ca.gov>
Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Richard Hatchett

<richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)"
<matthew.j.hepburn.civ@mail.mil>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>,
Tom Bossert <(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Also have been thinking more about thresholds for pulling triggers.

I thought a but more about what James said about true prevalence—that it would be at least twice as high as we currently think it is on the cruise ship. That would mean that true attack rate is closer to 40%, 80% of cases are asymptomatic, 6% of cases are hospitalized, 1% are critical (in ICU), and CFR is about 0.5%. But given the demographics of the cruise ship we are really the diluting effect of kids and young adults. They would be expected to have high attack rates and even higher rates of asymptomatic disease and mild disease (pushing up the % asymptomatics, reducing the overall hospitalization rate, ICU rate and CFR). So wanted to play with those estimates of thresholds again (will resend updated math).

Yesterday I was at my daughter's house helping them pull out vines that were planted as ground cover. The damn things grow everywhere, climbing up trees and smothering them (this isn't kudzu). My wife said something about these vines that made me think of what we are seeing in South Korea, Italy and now the US. When you plant these vines, they go thru 3 stages—sleep, creep, and leap. First year they don't seem to be doing much—they sleep (but they are laying down a root system that you cannot see). The next year they creep (seeing some spread above ground while the root system hidden from view continues to spread). And the next year they leap (the vines seem to explode everywhere you look).

That is exactly what Italy feels like (but speeded up). We are blind to what is "happening underground." The root system is really those dendrite transmission trees that Richard likes. I pulled out the Singapore graphic again of their contact tracing of cases (that is the root system). They have given up continuing to update that graphic and only providing linkages between cases when they provide brief summaries of individual cases. Probably getting to complex to show.

<image001.png>

In the US we just pulled up three random roots that are far from any plants we can see above the surface. My concern is that we are at the cusp of "leap" and cases are going to start popping like popcorn wherever we look.

This gets to the timing of NPIs

I went back to the Philadelphia-St Louis comparison of 1918. The difference between Philadelphia and St. Louis in 1918 in terms when they pulled the trigger on NPIs was about two weeks during the course of their individual outbreaks. In St. Louis, NPIs were put in place 1 week after the first cases at Jefferson Barracks, 5 days after the first death, and 3 days after the first civilian cases in St. Louis. In Philadelphia, NPIs were put in place 3 weeks after the first cases at the Navy Yard, 16 days after the first civilian cases in Philadelphia, 2 weeks after the first death.

We would estimate that the outbreak in Wuhan had about a 2 week head start on the rest of Hubei. So the measures China implemented to slow transmission happened about two later in the course of the

outbreak in Wuhan compared to the rest of Hubei Province. A comparison of hospitalization rate looks a lot like Philadelphia and St. Louis.

Hong Kong confirmed its first case of a traveler from Wuhan on Jan 23 (symptom onset of Jan 18). They would later learn of their first case of local transmission with symptom onset on Jan 22. On Jan 25, within 1 week of the symptom onset of the first case of a traveler and within 3 days of symptom onset of the first local case, they were already taking actions like suspending the reopening of schools—they were a bit lucky because the schools were closed for the Chinese New Year. So they took aggressive actions within 1 week of first recognized case. There was a lot of activity in Hong Kong in the first 3 weeks of January (large number of suspected cases that they were monitoring but they were only had syndromic surveillance since there were no diagnostics early on. So Hong Kong had been busy isolating scores of patients during the first 3 weeks of January based only on clinical presentation.

Singapore confirmed its first case on January 23 (traveler from Wuhan). The individual had symptom onset on Jan 20 on a flight to Singapore. On Feb 3, Singapore confirmed its first case of local transmission. Symptom onset for that individual was on Jan 29. On Feb 7, Singapore identified additional cases of local transmission and declared Code Orange and intensifies response. So Singapore takes aggressive action two weeks after confirmation of 1st case in a traveler and within 4 days of first case of local transmission.

Sent from [Mail \[go.microsoft.com\] \[protect2.fireeye.com\] \[protect2.fireeye.com\]](mailto:Mail [go.microsoft.com] [protect2.fireeye.com] [protect2.fireeye.com]) for Windows 10

From: [Carter Mecher](#)

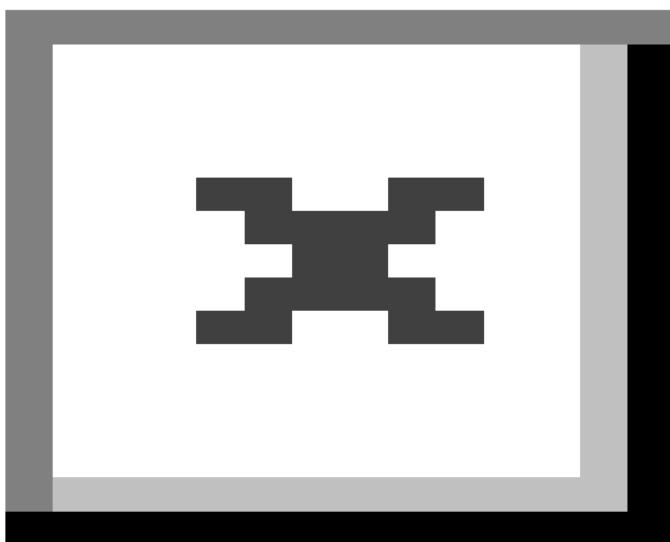
Sent: Sunday, March 1, 2020 5:58 AM

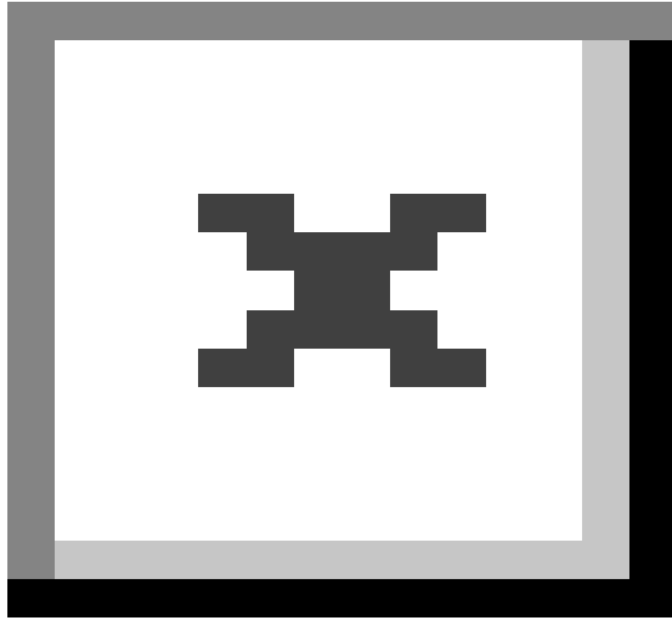
To: [Caneva, Duane](#); [Lawler, James V](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: RE: VA Projections using Cruise Ship Data

A few things for the group. Have been interested in whether we can see anything happening with flu surveillance (especially ILI) in places with COVID outbreaks, Am interested in looking at Japan, Hong Kong, Singapore, and Italy. So far, only found Hong Kong (Eva Lee found it). I will keep looking—really interested in South Korea and Italy to get a better sense of whether looking st ILI will be of any value. https://www.chp.gov.hk/files/pdf/fluexpress_week8_27_2_2020_eng.pdf [[chp.gov.hk](#)] [[protect2.fireeye.com](#)] [[protect2.fireeye.com](#)] This is data thru Feb 22 (week 8). Hong Kong is really do a good job of surveillance. And what they are doing in terms of NPIs seems to be working (just like Singapore).





Sent from [Mail \[go.microsoft.com\] \[protect2.fireeye.com\] \[protect2.fireeye.com\]](mailto:Mail [go.microsoft.com] [protect2.fireeye.com] [protect2.fireeye.com]) for Windows 10

From: [Caneva, Duane](#)

Sent: Saturday, February 29, 2020 11:18 PM

To: [Lawler, James V](#); [Carter Mecher](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: Re: VA Projections using Cruise Ship Data

+ Charity

CA seems first up.

Get Outlook for iOS [aka.ms] [protect2.fireeye.com] [protect2.fireeye.com]

From: Lawler, James V (b)(6)@unmc.edu>

Sent: Saturday, February 29, 2020 11:06:20 PM

To: Carter Mecher (b)(6)@charter.net>; Callahan, Michael V., M.D.

(b)(6)@mgh.harvard.edu>

Cc: Marcozzi, David (b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>;

Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane

(b)(6)@hq.dhs.gov>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert

(b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

Math looks good, Carter. And your calculations are enlightening. I had thought that hospital and ICU surveillance would be too late, but if you can do 100% surveillance on SARI in ICUs, then you might be able to act in time. Assume ICU is 1/5th of severe cases requiring hospitalization, then you are looking at roughly 12 cases per million. Let's assume 50% ascertainment rate for ICU, so when you detect 5-6 ICU COVID per million, you have hit your trigger. This assumes homogeneous distribution in communities, which is probably not true. So we may need to focus on certain segments (people from Chinatown in NY who are expected to have closer links to travelers from outbreak areas early) and have lower trigger – first 1-2 cases.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: Carter Mecher (b)(6)@charter.net>

Date: Saturday, February 29, 2020 at 6:53 PM

To: "Lawler, James V" (b)(6)@unmc.edu>, "Callahan, m."

(b)(6)@mgh.harvard.edu>

Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu>, Richard Hatchett

<richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)"

<matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" (b)(6)@hq.dhs.gov>, "Kadlec,

Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert (b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Something I have been thinking about wrt thresholds for NPIs. We usually think of the window for implementing NPIs as before 1% prevalence. But this disease has more than 50% asymptomatics, so the threshold is really 0.5% prevalence of any symptoms (including very mild symptoms). But CDC criteria for testing is severe disease. Let's say that 5% of those who are infected have severe disease, that means our threshold is 1%*5% = 0.05%. But it takes 2 weeks or so before a patient who is infected

becomes seriously ill. Over the span of 2 weeks plus the lag time for testing, the outbreak could have had at least 3 doublings (so an 8-fold increase). That may be conservative. So we are really talking about a threshold of close to $0.05\%/8 = 0.00625\%$. For a city of 1 M, that is 62 serious cases, 625 symptomatic, 1,250 infected. In 2 weeks, these numbers could be 500 serious, 5,000 symptomatic, 10,000 infected (the 1% threshold). Once you are there, the window is closed. If we assume a 3 week lag from infection onset to death, the number of deaths would be based on a denominator of 3 weeks ago, so divide 1,250 infected by roughly 3 (assume cases triple in a week), to get 400. Assume a CFR of 0.8%, so about 3 deaths. More than 3 deaths per million population is probably too late. Somebody could check my math.

Sent from Mail [go.microsoft.com] [protect2.fireeye.com] [protect2.fireeye.com] for Windows 10

From: Lawler, James V

Sent: Saturday, February 29, 2020 5:31 PM

To: Callahan, Michael V., M.D.

Cc: Marcozzi, David; Carter Mecher; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Caneva, Duane; Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

Agree. We have set our d/c criteria for persons in isolation (documented infection) at improved sx's, afebrile x48 hrs (off antipyretics) and swab neg X3 24 hrs apart.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Callahan, m." (b)(6)@mgh.harvard.edu>

Date: Saturday, February 29, 2020 at 2:39 PM

To: "Lawler, James V" (b)(6)@unmc.edu>

Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu>, Carter Mecher

(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane"

(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert (b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Not great.....Better than poorly performed Induced sputum for AFB !

James, results from a 3rd Deep nasal swab could help us establish a viable protocol my 2 cents.

Michael Callahan MD MSPH DTM&H, DMCC (UK)

Director, Mass-Casualty Infection Operations

Vaccine & Immunotherapy Center

Massachusetts General Hospital

Boston, MA

Special Advisor to the Assistant Secretary of Public Health Preparedness and Response
U.S Dept of Health and Human Services
O'Neil Building 6th Floor
Washington, DC

On Feb 29, 2020, at 05:35, Lawler, James V <(b)(6)@unmc.edu> wrote:

External Email - Use Caution

NP x2 = 75% sensitivity, if my probability skilz are correct.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Marcozzi, David" <(b)(6)@som.umaryland.edu>

Date: Saturday, February 29, 2020 at 5:11 AM

To: "Lawler, James V" <(b)(6)@unmc.edu>, Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Wow, NP still misses 50%?

Can we assume this increase in magnitude (x2-3) for anyplace doing testing with NP? How much more sensitive with NP x2? That is what we do at Maryland.

Respectfully,

David Marcozzi, MD, MHS-CL, FACEP

Associate Professor

Associate Chair of Population Health

Department of Emergency Medicine

University of Maryland School of Medicine

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Take time to deliberate; but when the time for action arrives, stop thinking and go in.
President Andrew Jackson

From: James Lawler <(b)(6)@unmc.edu>
Date: Friday, February 28, 2020 at 19:57
To: Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, David Marcozzi <(b)(6)@som.umaryland.edu>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Duane Caneva <(b)(6)@hq.dhs.gov>, Robert Kadlec <Robert.Kadlec@hhs.gov>, "(b)(6)@mgh.harvard.edu" <(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Interestingly Japanese health folks only did OP swabs x1. NP swabs are much more sensitive. OP for us about half as sensitive (or less). NP already misses 50% with a single swab. So would probably multiply Japanese swab + by 2-3 to get true infection rate.

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From: Carter Mecher (b)(6)@charter.net>
Sent: Friday, February 28, 2020 3:06:10 PM
To: Richard Hatchett <richard.hatchett@cepi.net>; Lawler, James V (b)(6)@unmc.edu>;
Marcozzi, David (b)(6)@som.umaryland.edu>; Hepburn, Matthew J CIV USARMY (USA)
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(OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Callahan, Michael V., M.D.
(b)(6)@mgh.harvard.edu>; Tom Bossert (b)(6)@me.com>
Subject: VA Projections using Cruise Ship Data

Non-UNMC email

I wanted to bounce this around the smaller group of wolverines. I also pulled the numbers of deaths annually in veterans and estimated deaths for all 19 M veterans using age specific death rates for males. The interesting thing is that the numbers of projected deaths related to COVID are actually pretty small compared to what we normally see for veterans. The challenge will be the amount of acute care—especially ICU care. The only chance that VA has is that we can knock down the attack rate thru TLC. The demand for acute care is overwhelming. The system would collapse under that level of demand.

Estimates of the impact of COVID on VA

In FY2019, VA cared for 6,271,019 unique veterans and had 9,237,638 veteran enrollees.

The Diamond Princess cruise ship outbreak can provide invaluable insights into the potential impact to VA.

Below is a comparison of the US population, the adult population aboard the cruise ship, and the Veteran population.

AGE	US Population 2017	% Distribution	Cruise Ship Passengers & Crew	% Distribution	FY2019 Veterans Vet Pop	% Distribution
20-29 years	45,489,095	19%	347	9%	932,473	5%
30-39 years	43,204,209	18%	428	12%	1,989,045	10%
40-49 years	40,617,231	17%	334	9%	2,194,505	11%
50-59 years	43,409,050	18%	398	11%	3,169,787	17%
60-69 years	36,824,083	15%	923	25%	3,735,399	19%
70-79 years	21,588,326	9%	1,015	27%	4,405,551	23%
>80 years	12,433,972	5%	227	6%	2,782,943	14%

Total population	243,565,966	100%	3,672	100%	19,209,704	100%
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The Veteran population is similar to the Diamond Princess cruise ship population. If anything, the veteran population is even older (so at even higher risk). There were 3,711 passengers and crew aboard the crew ship (1,045 crew and 2,666 passengers). As of February 28, 2020, there have been 751 confirmed cases of COVID (attack rate of 20%). There have been 6 deaths thus far (lower limit of a case fatality rate of 0.80%). [A timeline of the outbreak is provided at the bottom of this message.] 380 of the confirmed cases were asymptomatic (50.6%). It is estimated that approximately 12-15% of the 751 passengers and crew with confirmed disease required acute care with 36 hospitalized patients reported to be in serious condition (5%). We looked at a range of ICU admissions (2%-5% of those who become infected).

Given the similarities of the demographics of the cruise ship and veterans, we could project the potential impact on veterans.

Veterans	Population FY2019	Total Infected (20% AR)	Number Asymptomatic (50.6%)	Hospitalizations 12%	ICU Admissions 2%	ICU Admissions 5%	Deaths CFR 0.80%
All Veterans	19,209,704	3,841,941	1,944,022	461,033	76,839	192,097	30,736
Veteran Enrollees	9,237,638	1,847,528	934,849	221,703	36,951	92,376	14,780
Veteran Uniques	6,271,019	1,254,204	634,627	150,504	25,084	62,710	10,034

Need to place these numbers into perspective.

Acute Inpatient Care	VHA Total
Operating Beds Hospital	15,744
Operating Beds Medicine/Surgery	9,817
Operating Beds ICU	1,692
ADC Hospital	9,805
ADC Medicine/Surgery	6,225
ADC ICU	1,101
ADC On a Ventilator	240
Daily Hospital Admissions	1,641
Daily Admissions Medicine/Surgery	1,226
Daily Admissions/Transfers in ICU	389
Emergency Department Care	
Daily ER Visits	6,874
Outpatient Care (non-ER)	
Daily Clinic Visits	209,336

The estimated number of deaths for all 19 M veterans is ~556,000. The number of annual deaths of veteran enrollees in FY2019 was 350,737. The projected number of COVID deaths for veterans is 14,780

The number of veterans who had an acute care hospitalization in FY2019 and died at any time during FY2019 was 62,375. The number of COVID deaths projected in veteran uniques (users) is 10,034.

Annually, VA has:

- 600,000 acute (medical/surgical) admissions
- 140,000 ICU admissions
- 2.5M ER/Urgent Care visits

If we assume that this outbreak will last approximately 3 months, we can then overlay the projected demand upon the usual background utilization over 3 months.

Even if we simply focus on the veteran uniques (veterans who used VA services and not enrollees), the numbers are a little overwhelming. We assumed that there might be 3 ER visits for each admission--so roughly 450,000 ER visits, 150,000 hospitalizations, and 25,000-63,000 ICU admissions.

Over an average 3-month period, VA would have ~625,000 ER/Urgent care visits, 150,000 acute care admissions, and 35,000 ICU admissions.

We assumed that acutely ill COVID patients will have long lengths of stay (14-21 days). If VA needs to absorb 150,000 hospitalizations (each with a LOS of 14-21 days), it would require 2.1 M to 3.2 M BDOCs.

If we assumed 14 day LOS for each ICU admission, 25,000-63,000 ICU admissions would equate to 350,000-882,000 ICU BDOCs.

The VA has 15,744 hospital operational beds (runs an ADC of only 9,805). Even if VA mobilized all those potential beds (15,744), for 3 months (90 days), we would generate the capacity for 1.4 M BDOCs.

Demand for care would exceed capacity by 700K BDOCs for a 14 day LOS and 1.7M BDOCs for a LOS of 21 days (1.5-2.2 times maximum capacity).

The VA has 1,692 ICU beds (runs an ADC of 1,101). Mobilizing all 1,692 ICU beds for 3 months (90 days), we would generate 152,000 BDOCs. Demand for ICU care would exceed capacity by 200,000-730,000 ICU BDOCs (2-5 times existing capacity).

This demand for care would not be constant across the 3 month period. The demand would rise exponentially, plateau, and then fall. The real concern is what will happen during the peak period of the epidemic.

VA does not have enough capacity to meet this demand, even if it mobilized every potential hospital bed to care for COVID patients (and there would be no capacity to care for usual demand for non-COVID acute care). And all this will be happening with a VA workforce that will be significantly diminished due to illness, home isolation, home quarantine and childminding responsibilities related to closure of schools and daycare, and fear.

Timeline of Diamond Princess cruise ship outbreak

Date	Event	Cumulative Number of Confirmed Cases	Cumulative Number of Deaths	Note
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20-Jan	Cruise ship departs from Yokohama Japan			
25-Jan	80 year old passenger disembarks in Hong Kong			
1-Feb	80 year old passenger confirmed to have COVID-19			
	When results known, certificate of landing canceled and ship under quarantine. Tests for the virus would be administered to three groups: those with symptoms, those who got off in Hong Kong, and those who had close contact with the infected passenger.			
3-Feb	Ship arrives in port of Yokohama Japan			
5-Feb	10 passengers and crew confirmed +	10		
6-Feb	31 more passengers and crew confirmed +	41		
7-Feb	30 more passenger and crew confirmed +	61		
8-Feb	9 more passenger and crew confirmed +	70		
10-Feb	66 more passenger and crew confirmed +	136		439 tes
11-Feb	39 more passenger and crew confirmed +	175		492 tes
12-Feb	28 more passenger and crew confirmed +	203		4 in IC
13-Feb	15 more passenger and crew confirmed +	218		713 tes
14-Feb	67 more passenger and crew confirmed +	285		927 tes
15-Feb	70 more passenger and crew confirmed +	355		1,211 tested; asymptomatic
16-Feb	329 American evacuated from cruise ship (14 of the evacuees found to be +) 61 Americans remained on board 44 Americans remained hospitalized in Japan	369		
17-Feb	85 more passenger and crew confirmed +	454		1,721 tested; serious
18-Feb	167 more passenger and crew confirmed +	621		3,011 te
19-Feb	2 deaths	621	2	
20-Feb	13 more passenger and crew confirmed +	634	2	3,066 tested; seriously ill asymptomatic
23-Feb	Death reported in Japan		3	
24-Feb	Japan updates total to 691; US reports 36 in US	691	3	

25-Feb	Death reported in Japan; US reports 40 in US; UK 4; Australia 7; Hong Kong 4; Israel 2; Total 744; plus 4 not on ship	734	4	3,899 tested; seriously ill asymptomatic
26-Feb	US reports total of 42 cases in US; Japan announces that 45 of 813 former passengers have symptoms and will need to be tested; 14 new cases confirmed in the Diamond Princess cruise ship, raising the total to 705 cases inside the ship	750	4	
27-Feb	Australia (+1) 8 cases (repatriated)	751	4	
28-Feb	2 death reported in Japan	751	6	

As a check on deaths, I applied the age specific death rates per 100,000 population for the entire veteran population of 19M (90% male)

AGE	2019 VetPop	2017 Male All Cause Mortality per 100,000	Estimated 2017 All Cause Deaths
20 to 24 years	262,415	137.9	362
25 to 29 years	670,058	171.3	1,148
30 to 34 years	933,598	196.3	1,833
35 to 39 years	1,055,447	227.1	2,397
40 to 44 years	1,004,755	273.6	2,749
45 to 49 years	1,189,750	387.3	4,608
50 to 54 years	1,457,440	604.4	8,809
55 to 59 years	1,712,347	919.5	15,745
60 to 64 years	1,867,136	1,328.3	24,801
65 to 69 years	1,868,263	1,831.8	34,223
70 to 74 years	2,703,684	2,668.0	72,134
75 to 79 years	1,701,867	4,193.7	71,371
80 to 84 years	1,187,331	6,901.6	81,945
85 years and over	1,595,611	14,689.2	234,383
Total population	19,209,704	863.8	556,507

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Subject:	RE: For Your Attention and Review: INFORMATIONAL
Date:	2020/03/01 19:24:46
Priority:	Normal
Type:	Note

(b)(5)

From: Stecker, Judy (OS/IOS) <Judy.Stecker@hhs.gov>
Sent: Sunday, March 1, 2020 7:04 PM
To: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>
Cc: Harrison, Brian (HHS/IOS) <Brian.Harrison@hhs.gov>; Shuy, Bryan (OS/ASPR/IO) <Bryan.Shuy@hhs.gov>; Mango, Paul (HHS/IOS) <Paul.Mango@hhs.gov>; Adams, Steven A. (CDC/SNS/DSNS) <saa1@cdc.gov>; Grigsby, Garrett (HHS/OS/OGA) <Garrett.Grigsby@hhs.gov>; Zebley, Kyle (HHS/OS/OGA) <Kyle.Zebley@hhs.gov>
Subject: Re: For Your Attention and Review: INFORMATIONAL

Thanks. (b)(5)

Sent from my iPhone

On Mar 1, 2020, at 6:48 PM, Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov> wrote:

(b)(5)

Sent from my iPhone

On Mar 1, 2020, at 6:38 PM, Harrison, Brian (HHS/IOS) <Brian.Harrison@hhs.gov> wrote:

(b)(5)

Brian Harrison

Chief of Staff
U.S. Department of Health and Human Services
202.690.7000
brian.harrison@hhs.gov

On Mar 1, 2020, at 6:07 PM, Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov> wrote:

(b)(5)

From: Stecker, Judy (OS/IOS) <Judy.Stecker@hhs.gov>
Sent: Sunday, March 1, 2020 5:58 PM
To: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>
Cc: Harrison, Brian (HHS/IOS) <Brian.Harrison@hhs.gov>; Shuy, Bryan (OS/ASPR/IO) <Bryan.Shuy@hhs.gov>; Mango, Paul (HHS/IOS) <Paul.Mango@hhs.gov>; Adams, Steven A. (CDC/SNS/DSNS) <saa1@cdc.gov>
Subject: Re: For Your Attention and Review: INFORMATIONAL

(b)(5)

Pre decisional/deliberative

Sent from my iPhone

On Mar 1, 2020, at 5:55 PM, Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov> wrote:

State health officials in Washington State submitted a request for federal assistance through the governor to the HHS Assistant Secretary for Preparedness and Response (ASPR) on the evening Feb. 29, 2020.

As has been reported widely in the media, Washington State is responding to potential community-based COVID-19 transmission cohort in a high risk population and was the location of the first U.S. death attributed to COVID-19.

The original requested equipment includes 200,000 N95 respirators, 200,000 surgical/face masks, 5,000 face shields, 64,000 pairs of gloves and 60,000 disposable gowns. ASPR SNS entered into a discussion with State officials to determine what the State of Washington's actual needs were and mutually agreed to provide the following:

100,000 N95 respirators
 100,200 surgical/face masks
 2,565 face shields
 32,000 pairs of gloves
 30,000 disposable gowns (shipped directly from commercial supplier)

This request, based on acute actual need, was approved by the ASPR. On March 1, 2020, the Strategic National Stockpile (SNS) received direction to deploy personal protective equipment (PPE) to Washington State to assist with the State's ongoing COVID-19 response efforts. Some of this PPE, including surgical/face masks and face shields, have exceeded their manufacturer-designated shelf life. These items do not require formation of an airtight seal and may still provide barrier protection. According to CDC's National Institute for Occupational Safety and Health, in times when demand significantly outpaces supply, consideration can be made to use surgical/face masks, face shields and gloves past their manufacturer-designated shelf life when responding to the COVID-19 public health emergency.

The State was advised of this situation and recommend these products to be visually inspected before use. If noticeable deterioration is observed, the item should be discarded.

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Subject:	RE: For Your Attention and Review: INFORMATIONAL
Date:	2020/03/01 19:25:00
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Type:	Note

(b)(5)

From: Stecker, Judy (OS/IOS) <Judy.Stecker@hhs.gov>
Sent: Sunday, March 1, 2020 7:04 PM
To: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>
Cc: Harrison, Brian (HHS/IOS) <Brian.Harrison@hhs.gov>; Shuy, Bryan (OS/ASPR/IO) <Bryan.Shuy@hhs.gov>; Mango, Paul (HHS/IOS) <Paul.Mango@hhs.gov>; Adams, Steven A. (CDC/SNS/DSNS) <saa1@cdc.gov>; Grigsby, Garrett (HHS/OS/OGA) <Garrett.Grigsby@hhs.gov>; Zebley, Kyle (HHS/OS/OGA) <Kyle.Zebley@hhs.gov>
Subject: Re: For Your Attention and Review: INFORMATIONAL

Thanks.

(b)(5)

Sent from my iPhone

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(b)(5)

Sent from my iPhone

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(b)(5)

Brian Harrison
Chief of Staff
U.S. Department of Health and Human Services
202.690.7000
brian.harrison@hhs.gov

On Mar 1, 2020, at 6:07 PM, Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov> wrote:

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Cc: Harrison, Brian (HHS/IOS) <Brian.Harrison@hhs.gov>; Shuy, Bryan (OS/ASPR/IO) <Bryan.Shuy@hhs.gov>; Mango, Paul (HHS/IOS) <Paul.Mango@hhs.gov>; Adams, Steven A. (CDC/SNS/DSNS) <saa1@cdc.gov>
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Pre decisional/deliberative

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Sent Date:	2020/03/01 19:25:40
Delivered Date:	2020/03/01 19:25:00

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To:	Stecker, Judy (OS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0280b227911b40b6b30a81b8574ede6b-Stecker, Ju>
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Subject:	RE: For Your Attention and Review: INFORMATIONAL
Date:	2020/03/01 19:25:42
Priority:	Normal
Type:	Note

(b)(5)

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To:	Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>
Subject:	FYSA San Antonio City press release -- CDC confirms person being treated for COVID-19 was released from federally ordered quarantine (two negative tests and then a subsequent test came back weakly positive)
Date:	2020/03/01 22:01:12
Priority:	Normal
Type:	Note

CDC confirms person being treated for COVID-19 was released from federally ordered quarantine

INDIVIDUAL IS NOT SHOWING ANY SYMPTOMS BUT WAS BROUGHT BACK INTO QUARANTINE AS A RESULT OF ANOTHER POSITIVE TEST

CONTACT: Laura Mayes, Government & Public Affairs
(210) 207-1337; (956) 821-7925
laura.mayes@sanantonio.gov

Michelle Vigil, San Antonio Metro Health
Office: (210) 207-8172
michelle.vigil@sanantonio.gov

Monica Ramos, Bexar County
(210) 335-2742
monica.ramos@bexar.org

INFO CURRENT AS OF 7:00 p.m.

SAN ANTONIO (March 1, 2020) — Below are statements from Mayor Ron Nirenberg and Judge Nelson Wolff in regards to a COVID-19 patient who was released by the CDC and later placed back into quarantine. San Antonio Metro Health will support the CDC's effort to determine any individuals who may have come in contact with the person. Metro Health has been tracking where the person went, who they interacted with, timeframes outside the federally ordered quarantine and who may have been exposed. This information will be shared with the public when completed.

Statement from Mayor Ron Nirenberg:

"The fact that the CDC allowed the public to be exposed to a patient with a positive COVID-19 reading is unacceptable," said Mayor Ron Nirenberg. "We will hold the CDC accountable to providing complete transparency for the public. This situation is exactly why we have been asking for federal officials to accept the guidance of our medical community."

Mayor Nirenberg added, "Our San Antonio Metro Health District and other local officials continue to address the situation with the utmost professionalism and care. We will do everything within our power to ensure that the community is kept safe and the exposure risk remains low. The federal quarantine period for the Diamond Princess cruise ship evacuees ends tomorrow March 2. I have asked the CDC to do everything in their power to ensure that those who are released pose no risk to the community."

Statement from Judge Nelson Wolff:

"This has been our biggest concern and now we will experience the consequences of no action. Time and time again, I have raised issues concerning evacuees, inappropriate accommodations, the risk of

exposure during transporting and the need for additional monitoring and extended quarantine periods. I issued a letter on February 18th relating our concerns and then a joint letter with the Mayor on February 24th. To date, no response or even acknowledgement of our concerns has been made," said Bexar County Judge Nelson Wolff.

Judge Wolff added, "Our federal representatives, the CDC, and the US Department of Defense cannot and should not ignore us now. We are in dire need of additional resources and protocols immediately to include longer quarantine periods and the opening of appropriate facilities such as the Alabama facility or the San Antonio Military Medical Center. Please do not delay any longer and risk local transmission."

The CDC issued the following information on March 1, 2020

The Centers for Disease Control and Prevention (CDC) is retesting an individual who was released from isolation for COVID-19 at a local healthcare facility yesterday (because the individual met the criteria for release including two negative test results), but later returned to isolation after a pending, subsequent lab test came up positive for the virus that causes COVID-19.

This patient had been under isolation while being treated at a local medical facility for several weeks following a return to the U.S. from Wuhan, China, on a State Department chartered flight. At the time of discharge from the facility, the patient was asymptomatic and met all of CDC's criteria for release – resolution of any symptoms and two consecutive sets of negative test results, collected more than 24 hours apart. Following the patient's release, results of a subsequent sample were received, and determined to be weakly positive. Out of an abundance of caution, CDC decided to bring the individual back into isolation at a local medical facility. The discharged patient had some contact with others while out of isolation, and CDC and local public health partners are following up to trace possible exposures and notify them of their potential risk.

It's important to remember that this is a new virus and we are learning more about it every day. The cycle of infection with COVID-19 is not yet well understood, but the amount of virus is typically highest when the person is sickest. As the illness resolves, the amount of virus falls.

CDC is aware that others have encountered similar situations where test results have alternated back and forth between negative and positive. That is part of why CDC criteria states that a patient must have two negative test results from specimens taken more than 24 hours apart. The cycle of the virologic infection on this particular patient is longer than what has been previously seen.

This is an unfolding situation with many unknowns. CDC is making decisions on a case-by-case basis using the best available science at the time. CDC's priority is to protect both patients and communities.

For more information about COVID-19 visit www.cdc.gov/covid19.

<https://www.sanantonio.gov/Department-News/ArtMID/6798/ArticleID/18385/CDC-confirms-person-being-treated-for-COVID-19-was-released-from-federally-ordered-quarantine>

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Subject:	Fwd: HHS launches investigation into CDC coronavirus test problems
Date:	2020/03/01 22:04:58
Priority:	Normal
Type:	Note

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Begin forwarded message:

From: "POLITICO Pro Health Care" <politicoemail@politicopro.com>
Date: March 1, 2020 at 10:00:12 PM EST
To: <jennifer.sherman@hhs.gov>
Subject: HHS launches investigation into CDC coronavirus test problems
Reply-To: "POLITICO subscriptions" <reply-fe971c727160017c75-553241_HTML-911090403-1376319-272097@politicoemail.com>

HHS launches investigation into CDC coronavirus test problems

By David Lim, Sarah Karlin-Smith, Dan Diamond

03/01/2020 09:59 PM EST

HHS has launched an investigation into CDC's first round of coronavirus diagnostic tests that many public health laboratories across the country were unable to use because one component was flawed.

The delay in testing capacity has slowed the U.S. response to the coronavirus, which public health experts say impeded the detection of what are now outbreaks in multiple states. Only this week is the pace of testing beginning to step up.

The situation with the CDC lab in Atlanta — apparently a manufacturing defect — has already spurred finger pointing between various federal health agencies and officials, who are all under intense scrutiny amid a major public health crisis. President Donald Trump has repeatedly tried to reassure the public — and the sinking stock market — that it's under control.

It is unclear which senior health officials, at which agencies, knew about the CDC test problems and when they learned of them. HHS is convening a team of scientists from outside the CDC to investigate the test development and its flaws, according to an HHS spokesperson. HHS gave no further details Sunday night on who the experts are, or whether they included government as well as outside scientists.

Axios first reported the HHS investigation and said contamination involving the test component may have been the problem. An HHS official told POLITICO there was an problem with lab test cleanliness that affected the rollout of the coronavirus tests, but added that has been resolved. The official gave no further details.

It remains unclear why CDC developed its own coronavirus test, rather than relying on one distributed by the World Health Organization, but some experts suggest the agency wanted a test that would do a better job of ruling out other viruses.

FDA Commissioner Stephen Hahn said in a statement late Sunday that once FDA learned of the issue, it worked with CDC. The agencies agreed to drop the part of the test that was making verification difficult. The hope is that the modification will allow many more public health labs to start testing for the coronavirus. Some of them have already begun to test — and more Covid-19 cases are being detected.

“FDA has confidence in the design and current manufacturing of the test that already have and are continuing to be distributed,” Hahn said.

CDC did not respond to questions Sunday evening.

Brianna Ehley contributed to this report.

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Sent Date:	2020/03/01 22:04:57
Delivered Date:	2020/03/01 22:04:58

From:	Caneva, Duane <(b)(6)@hq.dhs.gov>
To:	Marcozzi, David <(b)(6)@som.umaryland.edu>; Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.roup (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Carter Mecher <(b)(6)@charter.net>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Lawler, James V <(b)(6)@unmc.edu>
CC:	Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject:	RE: VA Projections using Cruise Ship Data
Date:	2020/03/01 22:14:23
Priority:	Normal
Type:	Note

How far are we from antibody based testing to detect post-exposure illness status?

From: Marcozzi, David <(b)(6)@som.umaryland.edu>
Sent: Sunday, March 1, 2020 7:08 PM
To: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Carter Mecher <(b)(6)@charter.net>;
Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Lawler, James V
<(b)(6)@unmc.edu>
Cc: Caneva, Duane <(b)(6)@hq.dhs.gov>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>;
Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA)
<matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
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Call the GOV. Tell them they are Philadelphia.

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Date: Sunday, March 1, 2020 at 19:06
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James Lawler <(b)(6)@unmc.edu>
Cc: Duane Caneva <(b)(6)@hq.dhs.gov>, "Dean, Charity A@CDPH"
<Charity.Dean@cdph.ca.gov>, Richard Hatchett <richard.hatchett@cepi.net>, "matthew.
hepburn" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Ha good luck CDC briefed that they were going to recommend layered approaches measured to the blah
blah blah . Look out

From: Marcozzi, David <(b)(6)@som.umaryland.edu>
Sent: Sunday, March 1, 2020 6:45 PM
To: Carter Mecher <(b)(6)@charter.net>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Lawler, James V <(b)(6)@unmc.edu>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>
Cc: Caneva, Duane (DHS.GOV) <(b)(6)@hq.dhs.gov>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Some one nudge, push or mandate Seattle.

From: Carter Mecher <(b)(6)@charter.net>
Date: Sunday, March 1, 2020 at 16:01
To: <(b)(6)@mgh.harvard.edu> <(b)(6)@mgh.harvard.edu>, James Lawler <(b)(6)@unmc.edu>, Robert Kadlec <Robert.Kadlec@hhs.gov>
Cc: Duane Caneva <(b)(6)@hq.dhs.gov>, "Dean, Charity A@CDPH" <Charity.Dean@cdph.ca.gov>, David Marcozzi <(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Seattle now has 1 death and 2 patients in critical condition. Are they planning on taking any actions? NPIs?

I think we have more than hundreds of cases in the community (would add another zero). This is what Italy felt like.

Sent from Mail for Windows 10

From: Callahan, Michael V., M.D.
Sent: Sunday, March 1, 2020 12:31 PM
To: Lawler, James V; Kadlec, Robert (OS/ASPR/IO); Carter Mecher; Callahan, Michael V., M.D.
Cc: Caneva, Duane (DHS.GOV); Dean, Charity A@CDPH; Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Tom Bossert
Subject: Re: VA Projections using Cruise Ship Data

We briefed this at ASPR. There are slides from HK MOH shared with BARDA regarding where to put MCM investments (NPI, vs. vaccine vs biologics).

In that data, HK MOH and Guam Le, of SARS fame, reported the following for only Jan 1 - Feb 1:

1. • Current A/influenza and lower levels of B/influenza-as shown by respiratory viral panel and rapid A/flu tests did not deviate from influenza reporting seen in Guangdong or Nanjing and were slightly **higher** than 2018-19 transmission season
2. • COVID19 levels rose steadily during the Jan 15-Feb 1 date. These cases were **additive** to to MGH partner hospitals: Queen Mary, Hong Kong Adventists, Baptist and Gleneagle hospitals. The numbers do not include co-infection with flu, and do not include secondary risk factors (age, CKI, COPD, Diabetes or use of DMARDS/biologics_)
3. • Hong Kong is a great model for US, as bed count is close to CONUS Cities, demographics include significant middle income demographics and a community sector that is avoidant of central authority (Beijing).

Summary from that data: C19 appears to be additive to burden of ILI in HK, that these cases did not look at coinfection (and thus might be overstating severity).

I would suggest we **re-convene** the webex with **Guam Li**/HK MOH so we do not have to wait for the Feb 29 data. It would be most helpful to have others on this threat also hear this information.

This can be done under MITRE, RM, MGH or under the ASPR.

Added point: Hong Kong MOH was important at notifying friendly nations (Singapore, Canada) of inbound travelers from region who transitted via HKG (HK Intn. Airport) enroute to other sites. This information was not shared with CDC .

From: Lawler, James V <(b)(6)@unmc.edu>
Sent: Sunday, March 1, 2020 12:09 PM
To: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Carter Mecher <(b)(6)@charter.net>
Cc: Caneva, Duane (DHS.GOV) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>; Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

External Email - Use Caution

Interesting question. I think that flu is on downturn by itself. The more dramatic differential in week 8 could reflect –

1. • Normal variation that occurs outside peak flu times, that lots of other resp viruses circulate
2. • COVID predominance in ILI now that it is taking off and flu is on decline.

Given the ILI rate now double what lab confirmed flu %positive rate, that seems like a significant change.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>

Date: Sunday, March 1, 2020 at 11:03 AM

To: Carter Mecher <(b)(6)@charter.net>

Cc: "Lawler, James V" <(b)(6)@unmc.edu>, "Caneva, Duane (DHS.GOV)"

<(b)(6)@hq.dhs.gov>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, "Dean,

Charity A@CDPH" <charity.dean@cdph.ca.gov>, "Marcozzi, David"

<(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn,

Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert

<(b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Is it your judgement that COVID is pushing crowding Influenza out?

Sent from my iPhone

On Mar 1, 2020, at 10:08 AM, Carter Mecher <(b)(6)@charter.net> wrote:

Was able to find South Korea flu surveillance.

<https://www.cdc.go.kr/board/board.es?mid=a30504000000&bid=0033> [cdc.go.kr]

I pulled the data for weeks 49-8 (it doesn't look like ILI is much help).

Week	ILI Rate	%Positive Samples for Influenza
49	19.5%	18.6%
50	28.5%	16.2%
51	37.8%	25.9%
52	49.8%	35.1%
1	49.1%	43.4%
2	47.8%	40.6%

3	42.4%	37.6%
4	40.9%	43.4%
5	28.0%	40.9%
6	16.4%	16.7%
7	11.6%	15.8%
8	8.5%	3.9%

<6ECD810E8CEE448097E96CCC06727521.png>

Sent from Mail [protect2.fireeye.com] for Windows 10

From: Lawler, James V

Sent: Sunday, March 1, 2020 8:43 AM

To: Kadlec, Robert (OS/ASPR/IO); Carter Mecher; Caneva, Duane (DHS.GOV); Callahan, Michael V., M.D.; Dean, Charity A@CDPH

Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

As Carter points out, Wuhan and other cities started way too late.

James Lawler, MD, MPH, FIDSA
 Director, International Programs & Innovation
 Global Center for Health Security, and
 Associate Professor of Medicine
 Division of Infectious Diseases
 University of Nebraska Medical Center
 m: (b)(6)

(b)(6)@unmc.edu

<8652377C655D4CE6946BE0A9C3B0144B.png>

From: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>

Sent: Sunday, March 1, 2020 7:25:22 AM

To: Carter Mecher <(b)(6)@charter.net>; Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV [dhs.gov]) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>

Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Here is something to ponder from the China CDC report from a couple of days ago.

“A main finding of this characterization and exploratory analysis of the first 72,314 cases of COVID-19 found in China in the 40 days between first recognition of the outbreak of pneumonia with unknown etiology on December 31, 2019 to the end of the study period on February 11, 2020 is that this novel coronavirus is highly contagious. It has spread extremely rapidly from a single city to the entire country within only about 30 days. Moreover, it has achieved such far-reaching effects even in the face of extreme response measures including the complete shutdown and isolation of whole cities, cancellation of Chinese New Year celebrations, prohibition of attendance at school and work, massive mobilization of health and public health personnel as well as military medical units, and rapid construction of entire hospitals.”

From: Carter Mecher <(b)(6)@charter.net>
Sent: Sunday, March 1, 2020 7:58 AM
To: Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV [dhs.gov]) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>
Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

James said something to me that I do want to frame on the good wall (not the bad wall of understatements).

He gave a presentation to education leaders and I'm paraphrasing: With pandemic flu we would close the schools to protect the kids and reduce community transmission. With COVID we would close the schools (not so much to protect the kids), but to reduce community transmission and protect their grandparents.

James can phrase it better than I can—but that is the message. Tom are you listening?

Sent from Mail [protect2.fireeye.com] [protect2.fireeye.com] for Windows 10

From: Lawler, James V
Sent: Sunday, March 1, 2020 7:41 AM
To: Carter Mecher; Caneva, Duane; Callahan, Michael V., M.D.; Dean, Charity A@CDPH
Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Kadlec, Robert (OS/ASPR/IO); Tom Bossert
Subject: Re: VA Projections using Cruise Ship Data

Listening to CNN “experts” this morning. They have no clue what they are talking about – saying that young people really shouldn’t worry and older/vulnerable folks are the only ones that should be changing behavior. No concept that our elders are depending on the actions of the entire community and also that once the healthcare system collapses, all of the services for which younger folks access that system will be gone as well. We have to get out in front of messaging.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>
Date: Sunday, March 1, 2020 at 6:20 AM
To: "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Lawler, James V" <(b)(6)@unmc.edu>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <charity.dean@cdph.ca.gov>
Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Also have been thinking more about thresholds for pulling triggers.

I thought a but more about what James said about true prevalence—that it would be at least twice as high as we currently think it is on the cruise ship. That would mean that true attack rate is closer to 40%, 80% of cases are asymptomatic, 6% of cases are hospitalized, 1% are critical (in ICU), and CFR is about 0.5%. But given the demographics of the cruise ship we are really the diluting effect of kids and young adults. They would be expected to have high attack rates and even higher rates of asymptomatic disease and mild disease (pushing up the % asymptomatics, reducing the overall hospitalization rate, ICU rate and CFR). So wanted to play with those estimates of thresholds again (will resend updated math).

Yesterday I was at my daughter’s house helping them pull out vines that were planted as ground cover. The damn things grow everywhere, climbing up trees and smothering them (this isn’t kudzu). My wife said something about these vines that made me think of what we are seeing in South Korea, Italy and now the US. When you plant these vines, they go thru 3 stages—sleep, creep, and leap. First year they don’t seem to be doing much—they sleep (but they are laying down a root system that you cannot see). The next year they creep (seeing some spread above ground while the root system hidden from view continues to spread). And the next year they leap (the vines seem to explode everywhere you look).

That is exactly what Italy feels like (but speeded up). We are blind to what is “happening underground.” The root system is really those dendrite transmission trees that Richard likes. I pulled out the Singapore graphic again of their contact tracing of cases (that is the root system). They have given up continuing to update that graphic and only providing linkages between cases when they provide brief summaries of individual cases. Probably getting to complex to show.

<image001.png>

In the US we just pulled up three random roots that are far from any plants we can see above the surface. My concern is that we are at the cusp of “leap” and cases are going to start popping like popcorn wherever we look.

This gets to the timing of NPIs

I went back to the Philadelphia-St Louis comparison of 1918. The difference between Philadelphia and St. Louis in 1918 in terms when they pulled the trigger on NPIs was about two weeks during the course of their individual outbreaks. In St. Louis, NPIs were put in place 1 week after the first cases at Jefferson Barracks, 5 days after the first death, and 3 days after the first civilian cases in St. Louis. In Philadelphia, NPIs were put in place 3 weeks after the first cases at the Navy Yard, 16 days after the first civilian cases in Philadelphia, 2 weeks after the first death.

We would estimate that the outbreak in Wuhan had about a 2 week head start on the rest of Hubei. So the measures China implemented to slow transmission happened about two later in the course of the outbreak in Wuhan compared to the rest of Hubei Province. A comparison of hospitalization rate looks a lot like Philadelphia and St. Louis.

Hong Kong confirmed its first case of a traveler from Wuhan on Jan 23 (symptom onset of Jan 18). They would later learn of their first case of local transmission with symptom onset on Jan 22. On Jan 25, within 1 week of the symptom onset of the first case of a traveler and within 3 days of symptom onset of the first local case, they were already taking actions like suspending the reopening of schools—they were a bit lucky because the schools were closed for the Chinese New Year. So they took aggressive actions within 1 week of first recognized case. There was a lot of activity in Hong Kong in the first 3 weeks of January (large number of suspected cases that they were monitoring but they were only had syndromic surveillance since there were no diagnostics early on. So Hong Kong had been busy isolating scores of patients during the first 3 weeks of January based only on clinical presentation.

Singapore confirmed its first case on January 23 (traveler from Wuhan). The individual had symptom onset on Jan 20 on a flight to Singapore. On Feb 3, Singapore confirmed its first case of local transmission. Symptom onset for that individual was on Jan 29. On Feb 7, Singapore identified additional cases of local transmission and declared Code Orange and intensifies response. So Singapore takes aggressive action two weeks after confirmation of 1st case in a traveler and within 4 days of first case of local transmission.

Sent from [Mail \[go.microsoft.com\] \[protect2.fireeye.com\] \[protect2.fireeye.com\]](mailto:Mail [go.microsoft.com] [protect2.fireeye.com] [protect2.fireeye.com]) for Windows 10

From: [Carter Mecher](#)

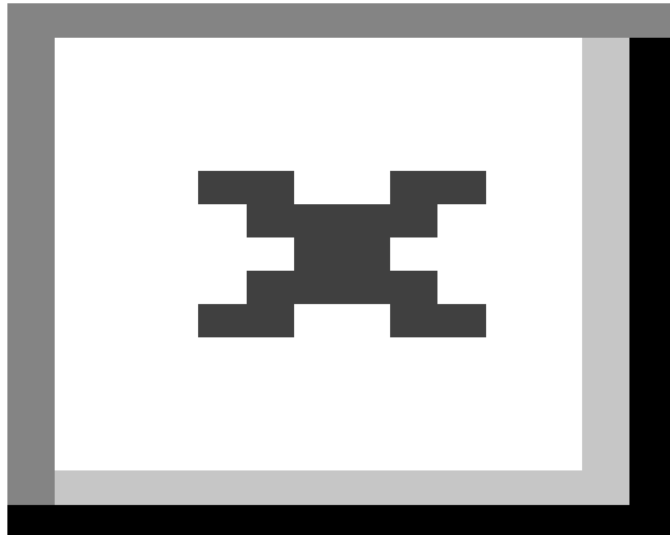
Sent: Sunday, March 1, 2020 5:58 AM

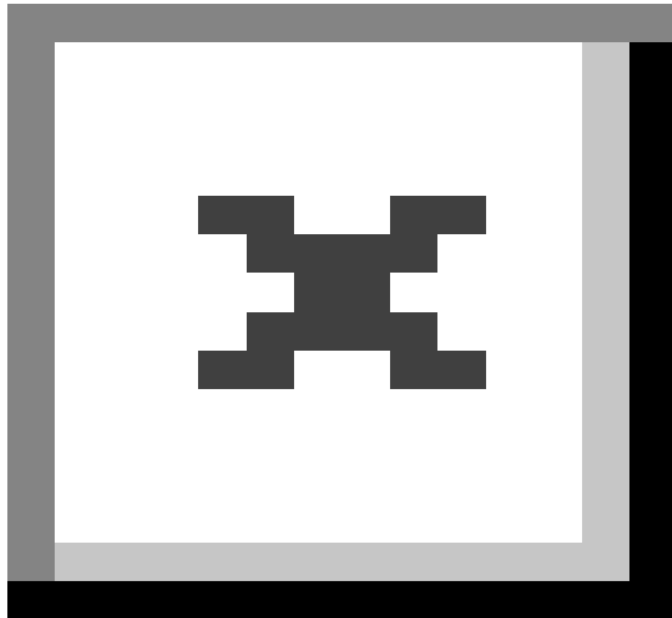
To: [Caneva, Duane](#); [Lawler, James V](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: RE: VA Projections using Cruise Ship Data

A few things for the group. Have been interested in whether we can see anything happening with flu surveillance (especially ILI) in places with COVID outbreaks, Am interested in looking at Japan, Hong Kong, Singapore, and Italy. So far, only found Hong Kong (Eva Lee found it). I will keep looking—really interested in South Korea and Italy to get a better sense of whether looking st ILI will be of any value. https://www.chp.gov.hk/files/pdf/fluexpress_week8_27_2_2020_eng.pdf [chp.gov.hk] [protect2.fireeye.com] [protect2.fireeye.com] This is data thru Feb 22 (week 8). Hong Kong is really do a good job of surveillance. And what they are doing in terms of NPIs seems to be working (just like Singapore).





Sent from [Mail \[go.microsoft.com\] \[protect2.fireeye.com\] \[protect2.fireeye.com\]](mailto:Mail [go.microsoft.com] [protect2.fireeye.com] [protect2.fireeye.com]) for Windows 10

From: [Caneva, Duane](#)

Sent: Saturday, February 29, 2020 11:18 PM

To: [Lawler, James V](#); [Carter Mecher](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: Re: VA Projections using Cruise Ship Data

+ Charity

CA seems first up.

Get Outlook for iOS [aka.ms] [protect2.fireeye.com] [protect2.fireeye.com]

From: Lawler, James V (b)(6)@unmc.edu
Sent: Saturday, February 29, 2020 11:06:20 PM
To: Carter Mecher (b)(6)@charter.net; Callahan, Michael V., M.D. (b)(6)@mgh.harvard.edu
Cc: Marcozzi, David (b)(6)@som.umaryland.edu; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane (b)(6)@hq.dhs.gov; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert (b)(6)@me.com
Subject: Re: VA Projections using Cruise Ship Data

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

Math looks good, Carter. And your calculations are enlightening. I had thought that hospital and ICU surveillance would be too late, but if you can do 100% surveillance on SARI in ICUs, then you might be able to act in time. Assume ICU is 1/5th of severe cases requiring hospitalization, then you are looking at roughly 12 cases per million. Let's assume 50% ascertainment rate for ICU, so when you detect 5-6 ICU COVID per million, you have hit your trigger. This assumes homogeneous distribution in communities, which is probably not true. So we may need to focus on certain segments (people from Chinatown in NY who are expected to have closer links to travelers from outbreak areas early) and have lower trigger – first 1-2 cases.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher (b)(6)@charter.net
Date: Saturday, February 29, 2020 at 6:53 PM
To: "Lawler, James V" (b)(6)@unmc.edu, "Callahan, m." (b)(6)@mgh.harvard.edu
Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" (b)(6)@hq.dhs.gov, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert (b)(6)@me.com
Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Something I have been thinking about wrt thresholds for NPIs. We usually think of the window for implementing NPIs as before 1% prevalence. But this disease has more than 50% asymptomatics, so the threshold is really 0.5% prevalence of any symptoms (including very mild symptoms). But CDC criteria for testing is severe disease. Let's say that 5% of those who are infected have severe disease, that means our threshold is 1%*5% = 0.05%. But it takes 2 weeks or so before a patient who is infected

becomes seriously ill. Over the span of 2 weeks plus the lag time for testing, the outbreak could have had at least 3 doublings (so an 8-fold increase). That may be conservative. So we are really talking about a threshold of close to $0.05\%/8 = 0.00625\%$. For a city of 1 M, that is 62 serious cases, 625 symptomatic, 1,250 infected. In 2 weeks, these numbers could be 500 serious, 5,000 symptomatic, 10,000 infected (the 1% threshold). Once you are there, the window is closed. If we assume a 3 week lag from infection onset to death, the number of deaths would be based on a denominator of 3 weeks ago, so divide 1,250 infected by roughly 3 (assume cases triple in a week), to get 400. Assume a CFR of 0.8%, so about 3 deaths. More than 3 deaths per million population is probably too late. Somebody could check my math.

Sent from Mail [go.microsoft.com] [protect2.fireeye.com] [protect2.fireeye.com] for Windows 10

From: Lawler, James V

Sent: Saturday, February 29, 2020 5:31 PM

To: Callahan, Michael V., M.D.

Cc: Marcozzi, David; Carter Mecher; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Caneva, Duane; Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

Agree. We have set our d/c criteria for persons in isolation (documented infection) at improved sx's, afebrile x48 hrs (off antipyretics) and swab neg X3 24 hrs apart.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Callahan, m." <(b)(6)@mgh.harvard.edu>

Date: Saturday, February 29, 2020 at 2:39 PM

To: "Lawler, James V" <(b)(6)@unmc.edu>

Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Carter Mecher

<(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane"

<(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert <(b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Not great.....Better than poorly performed Induced sputum for AFB !

James, results from a 3rd Deep nasal swab could help us establish a viable protocol my 2 cents.

Michael Callahan MD MSPH DTM&H, DMCC (UK)

Director, Mass-Casualty Infection Operations

Vaccine & Immunotherapy Center

Massachusetts General Hospital

Boston, MA

Special Advisor to the Assistant Secretary of Public Health Preparedness and Response
U.S Dept of Health and Human Services
O'Neil Building 6th Floor
Washington, DC

On Feb 29, 2020, at 05:35, Lawler, James V <(b)(6)@unmc.edu> wrote:

External Email - Use Caution

NP x2 = 75% sensitivity, if my probability skilz are correct.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Marcozzi, David" <(b)(6)@som.umaryland.edu>

Date: Saturday, February 29, 2020 at 5:11 AM

To: "Lawler, James V" <(b)(6)@unmc.edu>, Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Wow, NP still misses 50%?

Can we assume this increase in magnitude (x2-3) for anyplace doing testing with NP? How much more sensitive with NP x2? That is what we do at Maryland.

Respectfully,

David Marcozzi, MD, MHS-CL, FACEP

Associate Professor

Associate Chair of Population Health

Department of Emergency Medicine

University of Maryland School of Medicine

<https://protect2.fireeye.com/url?k=a7bf55f-fbebac23-a7bf8460-0cc47adc5fa2-8a2dc3825d9f57c0&u=https://protect2.fireeye.com/url?k=326cefaa-6e38f6d6-326cde95-0cc47adc5fa2-c129cf08dd467a6b&u=https://em.umaryland.edu/> [em.umaryland.edu] [protect2.fireeye.com]

[protect2.fireeye.com]

Associate Professor
Department of Epidemiology and Public Health
University of Maryland School of Medicine
<https://protect2.fireeye.com/url?k=a4702974-f8243008-a470184b-0cc47adc5fa2-e2d0c56fd31c6b4a&u=https://protect2.fireeye.com/url?k=57c9c074-0b9dd908-57c9f14b-0cc47adc5fa2-d22fd63f322f7de2&u=https://www.medschool.umaryland.edu/epidemiology/> [medschool.umaryland.edu] [protect2.fireeye.com] [protect2.fireeye.com]

Assistant Chief Medical Officer for Acute Care
University of Maryland Medical Center
<https://protect2.fireeye.com/url?k=87093548-db5d2c34-87090477-0cc47adc5fa2-1c2b3e4408e0433b&u=https://protect2.fireeye.com/url?k=62c118d1-3e9501ad-62c129ee-0cc47adc5fa2-820cfa44a0a33c19&u=http://www.umm.edu/> [umm.edu] [protect2.fireeye.com] [protect2.fireeye.com]

Deputy Medical Director for Mobile Integrated Health/Community Paramedicine
Baltimore City Fire Department
<https://protect2.fireeye.com/url?k=caef9057-96bb892b-caefa168-0cc47adc5fa2-0c50ee8bcd74bade&u=https://protect2.fireeye.com/url?k=6abda54f-36e9bc33-6abd9470-0cc47adc5fa2-08e3a5cc2eef572d&u=https://protect2.fireeye.com/url?k=917477bf-cd217eac-91744680-0cc47adb5650-a870777d1b77d0d4&u=https://protect2.fireeye.com/url?k=09aa77d0-55fe5efb-09aa46ef-0cc47a6d17cc-688ea8ebe48d26b6&u=https://fire.baltimorecity.gov/mobile-integrated-health-community-paramedicine> [fire.baltimorecity.gov] [protect2.fireeye.com] [protect2.fireeye.com]

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Take time to deliberate; but when the time for action arrives, stop thinking and go in.
President Andrew Jackson

From: James Lawler <(b)(6)@unmc.edu>
Date: Friday, February 28, 2020 at 19:57
To: Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, David Marcozzi <(b)(6)@som.umaryland.edu>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Duane Caneva <(b)(6)@hq.dhs.gov>, Robert Kadlec <Robert.Kadlec@hhs.gov>, (b)(6)@mgh.harvard.edu" <(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Interestingly Japanese health folks only did OP swabs x1. NP swabs are much more sensitive. OP for us about half as sensitive (or less). NP already misses 50% with a single swab. So would probably multiply Japanese swab + by 2-3 to get true infection rate.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation
Global Center for Health Security, and
Associate Professor of Medicine
Division of Infectious Diseases
University of Nebraska Medical Center
m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>
Sent: Friday, February 28, 2020 3:06:10 PM
To: Richard Hatchett <richard.hatchett@cepi.net>; Lawler, James V <(b)(6)@unmc.edu>; Marcozzi, David <(b)(6)@som.umaryland.edu>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Tom Bossert <(b)(6)@me.com>
Subject: VA Projections using Cruise Ship Data

Non-UNMC email

I wanted to bounce this around the smaller group of wolverines. I also pulled the numbers of deaths annually in veterans and estimated deaths for all 19 M veterans using age specific death rates for males. The interesting thing is that the numbers of projected deaths related to COVID are actually pretty small compared to what we normally see for veterans. The challenge will be the amount of acute care—especially ICU care. The only chance that VA has is that we can knock down the attack rate thru TLC. The demand for acute care is overwhelming. The system would collapse under that level of demand.

Estimates of the impact of COVID on VA

In FY2019, VA cared for 6,271,019 unique veterans and had 9,237,638 veteran enrollees.

The Diamond Princess cruise ship outbreak can provide invaluable insights into the potential impact to VA.

Below is a comparison of the US population, the adult population aboard the cruise ship, and the Veteran population.

AGE	US Population 2017	% Distribution	Cruise Ship Passengers & Crew	% Distribution	FY2019 Veterans Vet Pop	% Distribution
20-29 years	45,489,095	19%	347	9%	932,473	5%
30-39 years	43,204,209	18%	428	12%	1,989,045	10%
40-49 years	40,617,231	17%	334	9%	2,194,505	11%
50-59 years	43,409,050	18%	398	11%	3,169,787	17%

60-69 years	36,824,083	15%	923	25%	3,735,399	19%
70-79 years	21,588,326	9%	1,015	27%	4,405,551	23%
>80 years	12,433,972	5%	227	6%	2,782,943	14%
Total population	243,565,966	100%	3,672	100%	19,209,704	100%

The Veteran population is similar to the Diamond Princess cruise ship population. If anything, the veteran population is even older (so at even higher risk). There were 3,711 passengers and crew aboard the crew ship (1,045 crew and 2,666 passengers). As of February 28, 2020, there have been 751 confirmed cases of COVID (attack rate of 20%). There have been 6 deaths thus far (lower limit of a case fatality rate of 0.80%). [A timeline of the outbreak is provided at the bottom of this message.] 380 of the confirmed cases were asymptomatic (50.6%). It is estimated that approximately 12-15% of the 751 passengers and crew with confirmed disease required acute care with 36 hospitalized patients reported to be in serious condition (5%). We looked at a range of ICU admissions (2%-5% of those who become infected).

Given the similarities of the demographics of the cruise ship and veterans, we could project the potential impact on veterans.

Veterans	Population FY2019	Total Infected (20% AR)	Number Asymptomatic (50.6%)	Hospitalizations 12%	ICU Admissions 2%	ICU Admissions 5%	Deaths CFR 0.80%
All Veterans	19,209,704	3,841,941	1,944,022	461,033	76,839	192,097	30,736
Veteran Enrollees	9,237,638	1,847,528	934,849	221,703	36,951	92,376	14,780
Veteran Uniques	6,271,019	1,254,204	634,627	150,504	25,084	62,710	10,034

Need to place these numbers into perspective.

Acute Inpatient Care	VHA Total
Operating Beds Hospital	15,744
Operating Beds Medicine/Surgery	9,817
Operating Beds ICU	1,692
ADC Hospital	9,805
ADC Medicine/Surgery	6,225

ADC ICU	1,101
ADC On a Ventilator	240
Daily Hospital Admissions	1,641
Daily Admissions Medicine/Surgery	1,226
Daily Admissions/Transfers in ICU	389
Emergency Department Care	
Daily ER Visits	6,874
Outpatient Care (non-ER)	
Daily Clinic Visits	209,336

The estimated number of deaths for all 19 M veterans is ~556,000. The number of annual deaths of veteran enrollees in FY2019 was 350,737. The projected number of COVID deaths for veterans is 14,780

The number of veterans who had an acute care hospitalization in FY2019 and died at any time during FY2019 was 62,375. The number of COVID deaths projected in veteran uniques (users) is 10,034.

Annually, VA has:

- 600,000 acute (medical/surgical) admissions
- 140,000 ICU admissions
- 2.5M ER/Urgent Care visits

If we assume that this outbreak will last approximately 3 months, we can then overlay the projected demand upon the usual background utilization over 3 months.

Even if we simply focus on the veteran uniques (veterans who used VA services and not enrollees), the numbers are a little overwhelming. We assumed that there might be 3 ER visits for each admission--so roughly 450,000 ER visits, 150,000 hospitalizations, and 25,000-63,000 ICU admissions.

Over an average 3-month period, VA would have ~625,000 ER/Urgent care visits, 150,000 acute care admissions, and 35,000 ICU admissions.

We assumed that acutely ill COVID patients will have long lengths of stay (14-21 days). If VA needs to absorb 150,000 hospitalizations (each with a LOS of 14-21 days), it would require 2.1 M to 3.2 M BDOCs.

If we assumed 14 day LOS for each ICU admission, 25,000-63,000 ICU admissions would equate to 350,000-882,000 ICU BDOCs.

The VA has 15,744 hospital operational beds (runs an ADC of only 9,805). Even if VA mobilized all those potential beds (15,744), for 3 months (90 days), we would generate the capacity for 1.4 M BDOCs.

Demand for care would exceed capacity by 700K BDOCs for a 14 day LOS and 1.7M BDOCs for a LOS of 21 days (1.5-2.2 times maximum capacity).

The VA has 1,692 ICU beds (runs an ADC of 1,101). Mobilizing all 1,692 ICU beds for 3 months (90 days), we would generate 152,000 BDOCs. Demand for ICU care would exceed capacity by 200,000-730,000 ICU BDOCs (2-5 times existing capacity).

This demand for care would not be constant across the 3 month period. The demand would rise exponentially, plateau, and then fall. The real concern is what will happen during the peak period of the epidemic.

VA does not have enough capacity to meet this demand, even if it mobilized every potential hospital bed to care for COVID patients (and there would be no capacity to care for usual demand for non-COVID acute care). And all this will be happening with a VA workforce that will be significantly diminished due to illness, home isolation, home quarantine and childminding responsibilities related to closure of schools and daycare, and fear.

Timeline of Diamond Princess cruise ship outbreak

Date	Event	Cumulative Number of Confirmed Cases	Cumulative Number of Deaths	Note
20-Jan	Cruise ship departs from Yokohama Japan			
25-Jan	80 year old passenger disembarks in Hong Kong			
1-Feb	80 year old passenger confirmed to have COVID-19			
	When results known, certificate of landing canceled and ship under quarantine. Tests for the virus would be administered to three groups: those with symptoms, those who got off in Hong Kong, and those who had close contact with the infected passenger.			
3-Feb	Ship arrives in port of Yokohama Japan			
5-Feb	10 passengers and crew confirmed +	10		
6-Feb	31 more passengers and crew confirmed +	41		
7-Feb	30 more passenger and crew confirmed +	61		

8-Feb	9 more passenger and crew confirmed +	70		
10-Feb	66 more passenger and crew confirmed +	136		439 tes
11-Feb	39 more passenger and crew confirmed +	175		492 tes
12-Feb	28 more passenger and crew confirmed +	203		4 in IC
13-Feb	15 more passenger and crew confirmed +	218		713 tes
14-Feb	67 more passenger and crew confirmed +	285		927 tes
15-Feb	70 more passenger and crew confirmed +	355		1,211 tested; asymptom
16-Feb	329 American evacuated from cruise ship (14 of the evacuees found to be +) 61 Americans remained on board 44 Americans remained hospitalized in Japan	369		
17-Feb	85 more passenger and crew confirmed +	454		1,721 tested; serious
18-Feb	167 more passenger and crew confirmed +	621		3,011 te
19-Feb	2 deaths	621	2	
20-Feb	13 more passenger and crew confirmed +	634	2	3,061 tested; seriously ill asymptom
23-Feb	Death reported in Japan		3	
24-Feb	Japan updates total to 691; US reports 36 in US	691	3	
25-Feb	Death reported in Japan; US reports 40 in US; UK 4; Australia 7; Hong Kong 4; Israel 2; Total 744; plus 4 not on ship	734	4	3,891 tested; seriously ill asymptom

26-Feb	US reports total of 42 cases in US; Japan announces that 45 of 813 former passengers have symptoms and will need to be tested; 14 new cases confirmed in the Diamond Princess cruise ship, raising the total to 705 cases inside the ship	750	4	
27-Feb	Australia (+1) 8 cases (repatriated)	751	4	
28-Feb	2 death reported in Japan	751	6	

As a check on deaths, I applied the age specific death rates per 100,000 population for the entire veteran population of 19M (90% male)

AGE	2019 VetPop	2017 Male All Cause Mortality per 100,000	Estimated 2017 All Cause Deaths
20 to 24 years	262,415	137.9	362
25 to 29 years	670,058	171.3	1,148
30 to 34 years	933,598	196.3	1,833
35 to 39 years	1,055,447	227.1	2,397
40 to 44 years	1,004,755	273.6	2,749
45 to 49 years	1,189,750	387.3	4,608
50 to 54 years	1,457,440	604.4	8,809
55 to 59 years	1,712,347	919.5	15,745
60 to 64 years	1,867,136	1,328.3	24,801
65 to 69 years	1,868,263	1,831.8	34,223
70 to 74 years	2,703,684	2,668.0	72,134
75 to 79 years	1,701,867	4,193.7	71,371
80 to 84 years	1,187,331	6,901.6	81,945
85 years and over	1,595,611	14,689.2	234,383
Total population	19,209,704	863.8	556,507

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Sender:	Caneva, Duane <(b)(6)@hq.dhs.gov>
Recipient:	Marcozzi, David <(b)(6)@som.umaryland.edu>; Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Carter Mecher <(b)(6)@charter.net>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Lawler, James V <(b)(6)@unmc.edu>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Sent Date:	2020/03/01 22:13:38
Delivered Date:	2020/03/01 22:14:23

From:	Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.UP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A182EDA693D040D3832BAE6EFCF7A255-KADLEC, ROB>
To:	Shuy, Bryan (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fdeb5ca04b6b4ed19fec2209b5f571e7-Shuy, Bryan>
Subject:	Re: FYSA San Antonio City press release -- CDC confirms person being treated for COVID-19 was released from federally ordered quarantine (two negative tests and then a subsequent test came back weakly positive)
Date:	2020/03/01 22:17:34
Priority:	Normal
Type:	Note

Gov of TX POed calling Dr Bob

Sent from my iPhone

On Mar 1, 2020, at 10:01 PM, Shuy, Bryan (OS/ASPR/IO) <Bryan.Shuy@hhs.gov>wrote:

CDC confirms person being treated for COVID-19 was released from federally ordered quarantine

INDIVIDUAL IS NOT SHOWING ANY SYMPTOMS BUT WAS BROUGHT BACK INTO QUARANTINE AS A RESULT OF ANOTHER POSITIVE TEST

CONTACT: Laura Mayes, Government &Public Affairs
(210) 207-1337; (956) 821-7925
laura.mayes@sanantonio.gov

Michelle Vigil, San Antonio Metro Health
Office: (210) 207-8172
michelle.vigil@sanantonio.gov

Monica Ramos, Bexar County
(210) 335-2742
monica.ramos@bexar.org

INFO CURRENT AS OF 7:00 p.m.

SAN ANTONIO (March 1, 2020) — Below are statements from Mayor Ron Nirenberg and Judge Nelson Wolff in regards to a COVID-19 patient who was released by the CDC and later placed back into quarantine. San Antonio Metro Health will support the CDC's effort to determine any individuals who may have come in contact with the person. Metro Health has been tracking where the person went, who they interacted with, timeframes outside the federally ordered quarantine and who may have been exposed. This information will be shared with the public when completed.

Statement from Mayor Ron Nirenberg:

"The fact that the CDC allowed the public to be exposed to a patient with a positive COVID-19 reading is unacceptable," said Mayor Ron Nirenberg. "We will hold the CDC accountable to providing complete transparency for the public. This situation is exactly why we have been asking for federal officials to accept the guidance of our medical community."

Mayor Nirenberg added, "Our San Antonio Metro Health District and other local officials continue to address the situation with the utmost professionalism and care. We will do everything within our power to ensure that the community is kept safe and the exposure risk remains low. The federal quarantine period for the Diamond Princess cruise ship evacuees ends tomorrow March 2. I have asked the CDC to do everything in their power to ensure that those who are released pose no risk to

the community.”

Statement from Judge Nelson Wolff:

“This has been our biggest concern and now we will experience the consequences of no action. Time and time again, I have raised issues concerning evacuees, inappropriate accommodations, the risk of exposure during transporting and the need for additional monitoring and extended quarantine periods. I issued a letter on February 18th relating our concerns and then a joint letter with the Mayor on February 24th. To date, no response or even acknowledgement of our concerns has been made,” said Bexar County Judge Nelson Wolff.

Judge Wolff added, “Our federal representatives, the CDC, and the US Department of Defense cannot and should not ignore us now. We are in dire need of additional resources and protocols immediately to include longer quarantine periods and the opening of appropriate facilities such as the Alabama facility or the San Antonio Military Medical Center. Please do not delay any longer and risk local transmission.”

The CDC issued the following information on March 1, 2020

The Centers for Disease Control and Prevention (CDC) is retesting an individual who was released from isolation for COVID-19 at a local healthcare facility yesterday (because the individual met the criteria for release including two negative test results), but later returned to isolation after a pending, subsequent lab test came up positive for the virus that causes COVID-19.

This patient had been under isolation while being treated at a local medical facility for several weeks following a return to the U.S. from Wuhan, China, on a State Department chartered flight. At the time of discharge from the facility, the patient was asymptomatic and met all of CDC’s criteria for release – resolution of any symptoms and two consecutive sets of negative test results, collected more than 24 hours apart. Following the patient’s release, results of a subsequent sample were received, and determined to be weakly positive. Out of an abundance of caution, CDC decided to bring the individual back into isolation at a local medical facility. The discharged patient had some contact with others while out of isolation, and CDC and local public health partners are following up to trace possible exposures and notify them of their potential risk.

It’s important to remember that this is a new virus and we are learning more about it every day. The cycle of infection with COVID-19 is not yet well understood, but the amount of virus is typically highest when the person is sickest. As the illness resolves, the amount of virus falls.

CDC is aware that others have encountered similar situations where test results have alternated back and forth between negative and positive. That is part of why CDC criteria states that a patient must have two negative test results from specimens taken more than 24 hours apart. The cycle of the virologic infection on this particular patient is longer than what has been previously seen.

This is an unfolding situation with many unknowns. CDC is making decisions on a case-by-case basis using the best available science at the time. CDC’s priority is to protect both patients and communities.

For more information about COVID-19 visit www.cdc.gov/covid19.

<https://www.sanantonio.gov/Department-News/ArtMid/6798/ArticleID/18385/CDC-confirms-person-being-treated-for-COVID-19-was-released-from-federally-ordered-quarantine>

Sender:	Kadlec, Robert (OS/ASPR/IO) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A182EDA693D040D3832BAE6EFCF7A255-KADLEC, ROB>
Recipient:	Shuy, Bryan (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fdeb5ca04b6b4ed19fec2209b5f571e7-Shuy, Bryan>
Sent Date:	2020/03/01 22:17:34

From:	Lawler, James V <(b)(6)@unmc.edu>
To:	Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.FYDIBOHF23SPDLT/cn=Recipients/cn=b6ba3c00c7944e1b99ed3eecab996186-Duane.Canev>; Marcozzi, David <(b)(6)som.umaryland.edu>; Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Carter Mecher <(b)(6)@charter.net>; Callahan, Michael V., M.D. <(b)(6)mgh.harvard.edu>
CC:	Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject:	Re: VA Projections using Cruise Ship Data
Date:	2020/03/01 22:30:22
Priority:	Normal
Type:	Note

Ralph probably a good person to ask. Haven't seen any serology tests developed yet. I would guess some labs will have home-made serology soon, but it is likely many more weeks til we have commercial.

James Lawler, MD, MPH, FIDSA

m.(b)(6)

(b)(6)@unmc.edu

From: "Caneva, Duane" <(b)(6)@hq.dhs.gov>
Date: Sunday, March 1, 2020 at 9:13 PM
To: "Marcozzi, David" <(b)(6)som.umaryland.edu>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Carter Mecher <(b)(6)@charter.net>, "Callahan, m." <(b)(6)mgh.harvard.edu>, "Lawler, James V" <(b)(6)@unmc.edu>
Cc: "Dean, Charity A@CDPH" <Charity.Dean@cdph.ca.gov>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

How far are we from antibody based testing to detect post-exposure illness status?

From: Marcozzi, David <(b)(6)som.umaryland.edu>
Sent: Sunday, March 1, 2020 7:08 PM
To: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Carter Mecher <(b)(6)@charter.net>; Callahan, Michael V., M.D. <(b)(6)mgh.harvard.edu>; Lawler, James V <(b)(6)@unmc.edu>
Cc: Caneva, Duane <(b)(6)@hq.dhs.gov>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA)

<matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

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Call the GOV. Tell them they are Philadelphia.

From: Robert Kadlec <Robert.Kadlec@hhs.gov>

Date: Sunday, March 1, 2020 at 19:06

To: David Marcozzi <(b)(6)@som.umaryland.edu>, Carter Mecher <(b)(6)@charter.net>, <(b)(6)@mgh.harvard.edu> <(b)(6)@mgh.harvard.edu>, James Lawler <(b)(6)@unmc.edu>

Cc: Duane Caneva <(b)(6)@hq.dhs.gov>, "Dean, Charity A@CDPH" <Charity.Dean@cdph.ca.gov>, Richard Hatchett <richard.hatchett@cepi.net>, "matthew.hepburn" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert <(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Ha good luck CDC briefed that they were going to recommend layered approaches measured to the blah blah blah . Look out

From: Marcozzi, David <(b)(6)@som.umaryland.edu>

Sent: Sunday, March 1, 2020 6:45 PM

To: Carter Mecher <(b)(6)@charter.net>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Lawler, James V <(b)(6)@unmc.edu>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>

Cc: Caneva, Duane (DHS.GOV) <(b)(6)@hq.dhs.gov>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Some one nudge, push or mandate Seattle.

From: Carter Mecher <(b)(6)@charter.net>

Date: Sunday, March 1, 2020 at 16:01

To: <(b)(6)@mgh.harvard.edu> <(b)(6)@mgh.harvard.edu>, James Lawler <(b)(6)@unmc.edu>, Robert Kadlec <Robert.Kadlec@hhs.gov>

Cc: Duane Caneva <(b)(6)@hq.dhs.gov>, "Dean, Charity A@CDPH" <Charity.Dean@cdph.ca.gov>, David Marcozzi <(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "matthew.hepburn" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert <(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Seattle now has 1 death and 2 patients in critical condition. Are they planning on taking any actions? NPIs?

I think we have more than hundreds of cases in the community (would add another zero). This is what Italy felt like.

Sent from [Mail \[protect2.fireeye.com\]](mailto:Mail [protect2.fireeye.com]) for Windows 10

From: Callahan, Michael V., M.D.

Sent: Sunday, March 1, 2020 12:31 PM

To: Lawler, James V; Kadlec, Robert (OS/ASPR/IO); Carter Mecher; Callahan, Michael V., M.D.

Cc: Caneva, Duane (DHS.GOV); Dean, Charity A@CDPH; Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

We briefed this at ASPR. There are slides from HK MOH shared with BARDA regarding where to put MCM investments (NPI, vs. vaccine vs biologics).

In that data, HK MOH and Guam Le, of SARS fame, reported the following for only Jan 1 - Feb 1:

1. • Current A/influenza and lower levels of B/influenza-as shown by respiratory viral panel and rapid A/flu tests did not deviate from influenza reporting seen in Guangdong or Nanjing and were slightly **higher** than 2018-19 transmission season
2. • COVID19 levels rose steadily during the Jan 15-Feb 1 date. These cases were **additive** to MGH partner hospitals: Queen Mary, Hong Kong Adventists, Baptist and Gleneagle hospitals. The numbers do not include co-infection with flu, and do not include secondary risk factors (age, CKI, COPD, Diabetes or use of DMARDS/biologics_)
3. • Hong Kong is a great model for US, as bed count is close to CONUS Cities, demographics include significant middle income demographics and a community sector that is avoidant of central authority (Beijing).

Summary from that data: C19 appears to be additive to burden of ILI in HK, that these cases did not look at coinfection (and thus might be overstating severity).

I would suggest we **re-convene** the webex with **Guam Li**/HK MOH so we do not have to wait for the Feb 29 data. It would be most helpful to have others on this threat also hear this information.

This can be done under MITRE, RM, MGH or under the ASPR.

Added point: Hong Kong MOH was important at notifying friendly nations (Singapore, Canada) of inbound travelers from region who transited via HKG (HK Intn. Airport) enroute to other sites. This information was not shared with CDC .

cid:image001.png@01D5F016.A5EEB910

From: Lawler, James V (b)(6)@unmc.edu

Sent: Sunday, March 1, 2020 12:09 PM

To: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Carter Mecher (b)(6)@charter.net>

Cc: Caneva, Duane (DHS.GOV) (b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. (b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>; Marcozzi, David (b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert (b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

External Email - Use Caution

Interesting question. I think that flu is on downturn by itself. The more dramatic differential in week 8 could reflect –

1. • Normal variation that occurs outside peak flu times, that lots of other resp viruses circulate
2. • COVID predominance in ILI now that it is taking off and flu is on decline.

Given the ILI rate now double what lab confirmed flu %positive rate, that seems like a significant change.

James Lawler, MD, MPH, FIDSA

m (b)(6)

(b)(6)@unmc.edu

From: "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>

Date: Sunday, March 1, 2020 at 11:03 AM

To: Carter Mecher (b)(6)@charter.net>

Cc: "Lawler, James V" (b)(6)@unmc.edu>, "Caneva, Duane (DHS.GOV)" (b)(6)@hq.dhs.gov>, "Callahan, m." (b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <charity.dean@cdph.ca.gov>, "Marcozzi, David" (b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert (b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Is it your judgement that COVID is pushing crowding Influenza out?

Sent from my iPhone

On Mar 1, 2020, at 10:08 AM, Carter Mecher (b)(6)@charter.net> wrote:

Was able to find South Korea flu surveillance.

<https://www.cdc.go.kr/board/board.es?mid=a30504000000&bid=0033> [cdc.go.kr]
[protect2.fireeye.com]

I pulled the data for weeks 49-8 (it doesn't look like ILI is much help).

Week	ILI Rate	%Positive Samples for Influenza
49	19.5%	18.6%
50	28.5%	16.2%
51	37.8%	25.9%
52	49.8%	35.1%
1	49.1%	43.4%
2	47.8%	40.6%
3	42.4%	37.6%
4	40.9%	43.4%
5	28.0%	40.9%
6	16.4%	16.7%
7	11.6%	15.8%
8	8.5%	3.9%

<6ECD810E8CEE448097E96CCC06727521.png>

Sent from Mail [protect2.fireeye.com] [protect2.fireeye.com] for Windows 10

From: Lawler, James V

Sent: Sunday, March 1, 2020 8:43 AM

To: Kadlec, Robert (OS/ASPR/IO); Carter Mecher; Caneva, Duane (DHS.GOV); Callahan, Michael V.,M.D.; Dean, Charity A@CDPH

Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

As Carter points out, Wuhan and other cities started way too late.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation
Global Center for Health Security, and
Associate Professor of Medicine
Division of Infectious Diseases
University of Nebraska Medical Center
m: (b)(6)
(b)(6)@unmc.edu

<8652377C655D4CE6946BE0A9C3B0144B.png>

From: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>

Sent: Sunday, March 1, 2020 7:25:22 AM

To: Carter Mecher <(b)(6)@charter.net>; Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV [dhs.gov] [protect2.fireeye.com]) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>

Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Here is something to ponder from the China CDC report from a couple of days ago.

“A main finding of this characterization and exploratory analysis of the first 72,314 cases of COVID-19 found in China in the 40 days between first recognition of the outbreak of pneumonia with unknown etiology on December 31, 2019 to the end of the study period on February 11, 2020 is that this novel coronavirus is highly contagious. It has spread extremely rapidly from a single city to the entire country within only about 30 days. Moreover, it has achieved such far-reaching effects even in the face of extreme response measures including the complete shutdown and isolation of whole cities, cancellation of Chinese New Year celebrations, prohibition of attendance at school and work, massive mobilization of health and public health personnel as well as military medical units, and rapid construction of entire hospitals.”

From: Carter Mecher <(b)(6)@charter.net>

Sent: Sunday, March 1, 2020 7:58 AM

To: Lawler, James V <(b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV [dhs.gov] [protect2.fireeye.com]) <(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>

Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>;

Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert <(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

James said something to me that I do want to frame on the good wall (not the bad wall of understatements).

He gave a presentation to education leaders and I'm paraphrasing: With pandemic flu we would close the schools to protect the kids and reduce community transmission. With COVID we would close the schools (not so much to protect the kids), but to reduce community transmission and protect their grandparents.

James can phrase it better than I can—but that is the message. Tom are you listening?

Sent from Mail [protect2.fireeye.com] [protect2.fireeye.com] [protect2.fireeye.com] for Windows 10

From: Lawler, James V

Sent: Sunday, March 1, 2020 7:41 AM

To: Carter Mecher; Caneva, Duane; Callahan, Michael V., M.D.; Dean, Charity A@CDPH

Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

Listening to CNN "experts" this morning. They have no clue what they are talking about – saying that young people really shouldn't worry and older/vulnerable folks are the only ones that should be changing behavior. No concept that our elders are depending on the actions of the entire community and also that once the healthcare system collapses, all of the services for which younger folks access that system will be gone as well. We have to get out in front of messaging.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>

Date: Sunday, March 1, 2020 at 6:20 AM

To: "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Lawler, James V"

<(b)(6)@unmc.edu>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <charity.dean@cdph.ca.gov>

Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Richard Hatchett

<richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)"

<matthew.j.hepburn.civ@mail.mil>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>,

Tom Bossert <(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Also have been thinking more about thresholds for pulling triggers.

I thought a but more about what James said about true prevalence—that it would be at least twice as high as we currently think it is on the cruise ship. That would mean that true attack rate is closer to 40%, 80% of cases are asymptomatic, 6% of cases are hospitalized, 1% are critical (in ICU), and CFR is about 0.5%. But given the demographics of the cruise ship we are really the diluting effect of kids and young adults. They would be expected to have high attack rates and even higher rates of asymptomatic disease and mild disease (pushing up the % asymptomatics, reducing the overall hospitalization rate, ICU rate and CFR). So wanted to play with those estimates of thresholds again (will resend updated math).

Yesterday I was at my daughter's house helping them pull out vines that were planted as ground cover. The damn things grow everywhere, climbing up trees and smothering them (this isn't kudzu). My wife said something about these vines that made me think of what we are seeing in South Korea, Italy and now the US. When you plant these vines, they go thru 3 stages—sleep, creep, and leap. First year they don't seem to be doing much—they sleep (but they are laying down a root system that you cannot see). The next year they creep (seeing some spread above ground while the root system hidden from view continues to spread). And the next year they leap (the vines seem to explode everywhere you look).

That is exactly what Italy feels like (but speeded up). We are blind to what is “happening underground.” The root system is really those dendrite transmission trees that Richard likes. I pulled out the Singapore graphic again of their contact tracing of cases (that is the root system). They have given up continuing to update that graphic and only providing linkages between cases when they provide brief summaries of individual cases. Probably getting to complex to show.

<image001.png>

In the US we just pulled up three random roots that are far from any plants we can see above the surface. My concern is that we are at the cusp of “leap” and cases are going to start popping like popcorn wherever we look.

This gets to the timing of NPIs

I went back to the Philadelphia-St Louis comparison of 1918. The difference between Philadelphia and St. Louis in 1918 in terms when they pulled the trigger on NPIs was about two weeks during the course of their individual outbreaks. In St. Louis, NPIs were put in place 1 week after the first cases at Jefferson Barracks, 5 days after the first death, and 3 days after the first civilian cases in St. Louis. In Philadelphia, NPIs were put in place 3 weeks after the first cases at the Navy Yard, 16 days after the first civilian cases in Philadelphia, 2 weeks after the first death.

We would estimate that the outbreak in Wuhan had about a 2 week head start on the rest of Hubei. So the measures China implemented to slow transmission happened about two later in the course of the outbreak in Wuhan compared to the rest of Hubei Province. A comparison of hospitalization rate looks a lot like Philadelphia and St. Louis.

Hong Kong confirmed its first case of a traveler from Wuhan on Jan 23 (symptom onset of Jan 18). They would later learn of their first case of local transmission with symptom onset on Jan 22. On Jan 25, within 1 week of the symptom onset of the first case of a traveler and within 3 days of symptom onset of the first local case, they were already taking actions like suspending the reopening of schools—they

were a bit lucky because the schools were closed for the Chinese New Year. So they took aggressive actions within 1 week of first recognized case. There was a lot of activity in Hong Kong in the first 3 weeks of January (large number of suspected cases that they were monitoring but they were only had syndromic surveillance since there were no diagnostics early on. So Hong Kong had been busy isolating scores of patients during the first 3 weeks of January based only on clinical presentation.

Singapore confirmed its first case on January 23 (traveler from Wuhan). The individual had symptom onset on Jan 20 on a flight to Singapore. On Feb 3, Singapore confirmed its first case of local transmission. Symptom onset for that individual was on Jan 29. On Feb 7, Singapore identified additional cases of local transmission and declared Code Orange and intensifies response. So Singapore takes aggressive action two weeks after confirmation of 1st case in a traveler and within 4 days of first case of local transmission.

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for Windows 10

From: Carter Mecher

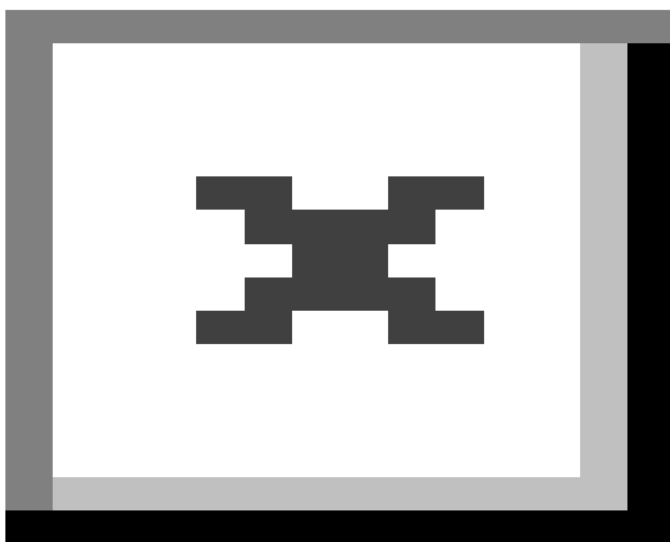
Sent: Sunday, March 1, 2020 5:58 AM

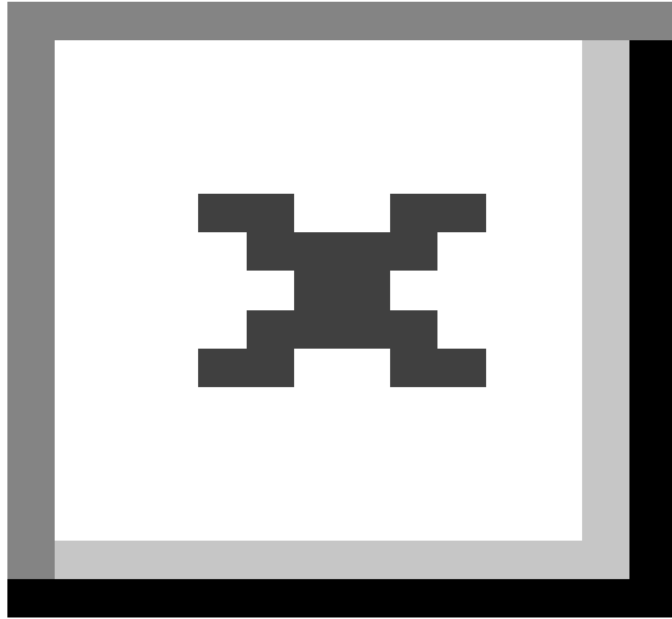
To: Caneva, Duane; Lawler, James V; Callahan, Michael V., M.D.; Dean, Charity A@CDPH

Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: RE: VA Projections using Cruise Ship Data

A few things for the group. Have been interested in whether we can see anything happening with flu surveillance (especially ILI) in places with COVID outbreaks, Am interested in looking at Japan, Hong Kong, Singapore, and Italy. So far, only found Hong Kong (Eva Lee found it). I will keep looking—really interested in South Korea and Italy to get a better sense of whether looking st ILI will be of any value. https://www.chp.gov.hk/files/pdf/fluexpress_week8_27_2_2020_eng.pdf [chp.gov.hk] [protect2.fireeye.com] [protect2.fireeye.com] [protect2.fireeye.com] This is data thru Feb 22 (week 8). Hong Kong is really do a good job of surveillance. And what they are doing in terms of NPIs seems to be working (just like Singapore).





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for Windows 10

From: [Caneva, Duane](#)

Sent: Saturday, February 29, 2020 11:18 PM

To: [Lawler, James V](#); [Carter Mecher](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: Re: VA Projections using Cruise Ship Data

+ Charity

CA seems first up.

Get Outlook for iOS [aka.ms] [protect2.fireeye.com] [protect2.fireeye.com] [protect2.fireeye.com]

From: Lawler, James V (b)(6)@unmc.edu
Sent: Saturday, February 29, 2020 11:06:20 PM
To: Carter Mecher (b)(6)@charter.net; Callahan, Michael V., M.D. (b)(6)@mgh.harvard.edu
Cc: Marcozzi, David (b)(6)@som.umaryland.edu; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane (b)(6)@hq.dhs.gov; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert (b)(6)@me.com
Subject: Re: VA Projections using Cruise Ship Data

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

Math looks good, Carter. And your calculations are enlightening. I had thought that hospital and ICU surveillance would be too late, but if you can do 100% surveillance on SARI in ICUs, then you might be able to act in time. Assume ICU is 1/5th of severe cases requiring hospitalization, then you are looking at roughly 12 cases per million. Let's assume 50% ascertainment rate for ICU, so when you detect 5-6 ICU COVID per million, you have hit your trigger. This assumes homogeneous distribution in communities, which is probably not true. So we may need to focus on certain segments (people from Chinatown in NY who are expected to have closer links to travelers from outbreak areas early) and have lower trigger – first 1-2 cases.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher (b)(6)@charter.net
Date: Saturday, February 29, 2020 at 6:53 PM
To: "Lawler, James V" (b)(6)@unmc.edu, "Callahan, m." (b)(6)@mgh.harvard.edu
Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" (b)(6)@hq.dhs.gov, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert (b)(6)@me.com
Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Something I have been thinking about wrt thresholds for NPIs. We usually think of the window for implementing NPIs as before 1% prevalence. But this disease has more than 50% asymptomatics, so the threshold is really 0.5% prevalence of any symptoms (including very mild symptoms). But CDC criteria for testing is severe disease. Let's say that 5% of those who are infected have severe disease, that

means our threshold is $1\% \times 5\% = 0.05\%$. But it takes 2 weeks or so before a patient who is infected becomes seriously ill. Over the span of 2 weeks plus the lag time for testing, the outbreak could have had at least 3 doublings (so an 8-fold increase). That may be conservative. So we are really talking about a threshold of close to $0.05\%/8 = 0.00625\%$. For a city of 1 M, that is 62 serious cases, 625 symptomatic, 1,250 infected. In 2 weeks, these numbers could be 500 serious, 5,000 symptomatic, 10,000 infected (the 1% threshold). Once you are there, the window is closed. If we assume a 3 week lag from infection onset to death, the number of deaths would be based on a denominator of 3 weeks ago, so divide 1,250 infected by roughly 3 (assume cases triple in a week), to get 400. Assume a CFR of 0.8%, so about 3 deaths. More than 3 deaths per million population is probably too late. Somebody could check my math.

Sent from Mail [go.microsoft.com] [protect2.fireeye.com] [protect2.fireeye.com] [protect2.fireeye.com] for Windows 10

From: Lawler, James V

Sent: Saturday, February 29, 2020 5:31 PM

To: Callahan, Michael V., M.D.

Cc: Marcozzi, David; Carter Mecher; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Caneva, Duane; Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

Agree. We have set our d/c criteria for persons in isolation (documented infection) at improved sx's, afebrile x48 hrs (off antipyretics) and swab neg X3 24 hrs apart.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Callahan, m." <(b)(6)@mgh.harvard.edu>

Date: Saturday, February 29, 2020 at 2:39 PM

To: "Lawler, James V" <(b)(6)@unmc.edu>

Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Carter Mecher

<(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane"

<(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert <(b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Not great.....Better then poorly performed Induced sputum for AFB !

James, results from a 3rd Deep nasal swab could help us establish a viable protocol my 2 cents.

Michael Callahan MD MSPH DTM&H, DMCC (UK)

Director, Mass-Casualty Infection Operations

Vaccine & Immunotherapy Center
Massachusetts General Hospital
Boston, MA

Special Advisor to the Assistant Secretary of Public Health Preparedness and Response
U.S Dept of Health and Human Services
O'Neil Building 6th Floor
Washington, DC

On Feb 29, 2020, at 05:35, Lawler, James V <(b)(6)>@unmc.edu> wrote:

External Email - Use Caution

NP x2 = 75% sensitivity, if my probability skilz are correct.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)>@unmc.edu

From: "Marcozzi, David" <(b)(6)>@som.umaryland.edu>
Date: Saturday, February 29, 2020 at 5:11 AM
To: "Lawler, James V" <(b)(6)>@unmc.edu>, Carter Mecher <(b)(6)>@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" <(b)(6)>@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, "Callahan, m." <(b)(6)>@mgh.harvard.edu>, Tom Bossert <(b)(6)>@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Wow, NP still misses 50%?

Can we assume this increase in magnitude (x2-3) for anyplace doing testing with NP? How much more sensitive with NP x2? That is what we do at Maryland.

Respectfully,

David Marcozzi, MD, MHS-CL, FACEP
Associate Professor
Associate Chair of Population Health
Department of Emergency Medicine
University of Maryland School of Medicine
<https://protect2.fireeye.com/url?k=4e4f6dad-121a64be-4e4f5c92-0cc47adb5650-506da2ecbd8557d5&u=https://protect2.fireeye.com/url?k=326cefaa-6e38f6d6-326cde95-0cc47adc5fa2->

[c129cf08dd467a6b&u=https://em.umaryland.edu/](https://em.umaryland.edu/) [em.umaryland.edu] [protect2.fireeye.com]
[protect2.fireeye.com] [protect2.fireeye.com]

Associate Professor

Department of Epidemiology and Public Health

University of Maryland School of Medicine

[https://protect2.fireeye.com/url?k=31993b21-6dcc3232-31990a1e-0cc47adb5650-](https://protect2.fireeye.com/url?k=31993b21-6dcc3232-31990a1e-0cc47adb5650-f2afd6762120760f&u=https://protect2.fireeye.com/url?k=57c9c074-0b9dd908-57c9f14b-0cc47adc5fa2-d22fd63f322f7de2&u=https://www.medschool.umaryland.edu/epidemiology/)

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Assistant Chief Medical Officer for Acute Care

University of Maryland Medical Center

[https://protect2.fireeye.com/url?k=8aeaea91-d6bbe382-8aeedbae-0cc47adb5650-](https://protect2.fireeye.com/url?k=8aeaea91-d6bbe382-8aeedbae-0cc47adb5650-e0dfa29fb86752f6&u=https://protect2.fireeye.com/url?k=62c118d1-3e9501ad-62c129ee-0cc47adc5fa2-820cfa44a0a33c19&u=http://www.umm.edu/)

[e0dfa29fb86752f6&u=https://protect2.fireeye.com/url?k=62c118d1-3e9501ad-62c129ee-0cc47adc5fa2-](https://protect2.fireeye.com/url?k=62c118d1-3e9501ad-62c129ee-0cc47adc5fa2-820cfa44a0a33c19&u=http://www.umm.edu/)

[820cfa44a0a33c19&u=http://www.umm.edu/](https://protect2.fireeye.com/url?k=62c118d1-3e9501ad-62c129ee-0cc47adc5fa2-820cfa44a0a33c19&u=http://www.umm.edu/) [umm.edu] [protect2.fireeye.com] [protect2.fireeye.com]

[protect2.fireeye.com]

Deputy Medical Director for Mobile Integrated Health/Community Paramedicine

Baltimore City Fire Department

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Take time to deliberate; but when the time for action arrives, stop thinking and go in.

President Andrew Jackson

From: James Lawler <(b)(6)@unmc.edu>

Date: Friday, February 28, 2020 at 19:57

To: Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>,

David Marcozzi <(b)(6)@som.umaryland.edu>, "matthew. hepburn"

<matthew.j.hepburn.civ@mail.mil>, Duane Caneva <(b)(6)@hq.dhs.gov>, Robert

Kadlec <Robert.Kadlec@hhs.gov>, "(b)(6)@mgh.harvard.edu"

<(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Interestingly Japanese health folks only did OP swabs x1. NP swabs are much more sensitive. OP for us about half as sensitive (or less). NP already misses 50% with a single swab. So would probably multiply Japanese swab + by 2-3 to get true infection rate.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation
Global Center for Health Security, and
Associate Professor of Medicine
Division of Infectious Diseases
University of Nebraska Medical Center

m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>
Sent: Friday, February 28, 2020 3:06:10 PM
To: Richard Hatchett <richard.hatchett@cepi.net>; Lawler, James V <(b)(6)@unmc.edu>; Marcozzi, David <(b)(6)@som.umaryland.edu>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Tom Bossert <(b)(6)@me.com>
Subject: VA Projections using Cruise Ship Data

Non-UNMC email

I wanted to bounce this around the smaller group of wolverines. I also pulled the numbers of deaths annually in veterans and estimated deaths for all 19 M veterans using age specific death rates for males. The interesting thing is that the numbers of projected deaths related to COVID are actually pretty small compared to what we normally see for veterans. The challenge will be the amount of acute care—especially ICU care. The only chance that VA has is that we can knock down the attack rate thru TLC. The demand for acute care is overwhelming. The system would collapse under that level of demand.

Estimates of the impact of COVID on VA

In FY2019, VA cared for 6,271,019 unique veterans and had 9,237,638 veteran enrollees.

The Diamond Princess cruise ship outbreak can provide invaluable insights into the potential impact to VA.

Below is a comparison of the US population, the adult population aboard the cruise ship, and the Veteran population.

AGE	US Population 2017	% Distribution	Cruise Ship Passengers & Crew	% Distribution	FY2019 Veterans Vet Pop	% Distribution
20-29 years	45,489,095	19%	347	9%	932,473	5%

30-39 years	43,204,209	18%	428	12%	1,989,045	10%
40-49 years	40,617,231	17%	334	9%	2,194,505	11%
50-59 years	43,409,050	18%	398	11%	3,169,787	17%
60-69 years	36,824,083	15%	923	25%	3,735,399	19%
70-79 years	21,588,326	9%	1,015	27%	4,405,551	23%
>80 years	12,433,972	5%	227	6%	2,782,943	14%
Total population	243,565,966	100%	3,672	100%	19,209,704	100%

The Veteran population is similar to the Diamond Princess cruise ship population. If anything, the veteran population is even older (so at even higher risk). There were 3,711 passengers and crew aboard the crew ship (1,045 crew and 2,666 passengers). As of February 28, 2020, there have been 751 confirmed cases of COVID (attack rate of 20%). There have been 6 deaths thus far (lower limit of a case fatality rate of 0.80%). [A timeline of the outbreak is provided at the bottom of this message.] 380 of the confirmed cases were asymptomatic (50.6%). It is estimated that approximately 12-15% of the 751 passengers and crew with confirmed disease required acute care with 36 hospitalized patients reported to be in serious condition (5%). We looked at a range of ICU admissions (2%-5% of those who become infected).

Given the similarities of the demographics of the cruise ship and veterans, we could project the potential impact on veterans.

Veterans	Population FY2019	Total Infected (20% AR)	Number Asymptomatic (50.6%)	Hospitalizations 12%	ICU Admissions 2%	ICU Admissions 5%	Deaths CFR 0.80%
All Veterans	19,209,704	3,841,941	1,944,022	461,033	76,839	192,097	30,736
Veteran Enrollees	9,237,638	1,847,528	934,849	221,703	36,951	92,376	14,780
Veteran Uniques	6,271,019	1,254,204	634,627	150,504	25,084	62,710	10,034

Need to place these numbers into perspective.

Acute Inpatient Care	VHA Total
Operating Beds Hospital	15,744
Operating Beds Medicine/Surgery	9,817

Operating Beds ICU	1,692
ADC Hospital	9,805
ADC Medicine/Surgery	6,225
ADC ICU	1,101
ADC On a Ventilator	240
Daily Hospital Admissions	1,641
Daily Admissions Medicine/Surgery	1,226
Daily Admissions/Transfers in ICU	389
Emergency Department Care	
Daily ER Visits	6,874
Outpatient Care (non-ER)	
Daily Clinic Visits	209,336

The estimated number of deaths for all 19 M veterans is ~556,000. The number of annual deaths of veteran enrollees in FY2019 was 350,737. The projected number of COVID deaths for veterans is 14,780

The number of veterans who had an acute care hospitalization in FY2019 and died at any time during FY2019 was 62,375. The number of COVID deaths projected in veteran uniques (users) is 10,034.

Annually, VA has:

- 600,000 acute (medical/surgical) admissions
- 140,000 ICU admissions
- 2.5M ER/Urgent Care visits

If we assume that this outbreak will last approximately 3 months, we can then overlay the projected demand upon the usual background utilization over 3 months.

Even if we simply focus on the veteran uniques (veterans who used VA services and not enrollees), the numbers are a little overwhelming. We assumed that there might be 3 ER visits for each admission--so roughly 450,000 ER visits, 150,000 hospitalizations, and 25,000-63,000 ICU admissions.

Over an average 3-month period, VA would have ~625,000 ER/Urgent care visits, 150,000 acute care admissions, and 35,000 ICU admissions.

We assumed that acutely ill COVID patients will have long lengths of stay (14-21 days). If VA needs to absorb 150,000 hospitalizations (each with a LOS of 14-21 days), it would require 2.1 M to 3.2 M BDOCs.

If we assumed 14 day LOS for each ICU admission, 25,000-63,000 ICU admissions would equate to 350,000-882,000 ICU BDOCs.

The VA has 15,744 hospital operational beds (runs an ADC of only 9,805). Even if VA mobilized all those potential beds (15,744), for 3 months (90 days), we would generate the capacity for 1.4 M BDOCs.

Demand for care would exceed capacity by 700K BDOCs for a 14 day LOS and 1.7M BDOCs for a LOS of 21 days (1.5-2.2 times maximum capacity).

The VA has 1,692 ICU beds (runs an ADC of 1,101). Mobilizing all 1,692 ICU beds for 3 months (90 days), we would generate 152,000 BDOCs. Demand for ICU care would exceed capacity by 200,000-730,000 ICU BDOCs (2-5 times existing capacity).

This demand for care would not be constant across the 3 month period. The demand would rise exponentially, plateau, and then fall. The real concern is what will happen during the peak period of the epidemic.

VA does not have enough capacity to meet this demand, even if it mobilized every potential hospital bed to care for COVID patients (and there would be no capacity to care for usual demand for non-COVID acute care). And all this will be happening with a VA workforce that will be significantly diminished due to illness, home isolation, home quarantine and childminding responsibilities related to closure of schools and daycare, and fear.

Timeline of Diamond Princess cruise ship outbreak

Date	Event	Cumulative Number of Confirmed Cases	Cumulative Number of Deaths	Note
20-Jan	Cruise ship departs from Yokohama Japan			
25-Jan	80 year old passenger disembarks in Hong Kong			
1-Feb	80 year old passenger confirmed to have COVID-19			
	When results known, certificate of landing canceled and ship under quarantine. Tests for the virus would be administered to three groups: those with symptoms, those who got off in Hong Kong, and those who had close contact with the infected passenger.			
3-Feb	Ship arrives in port of Yokohama Japan			

5-Feb	10 passengers and crew confirmed +	10		
6-Feb	31 more passengers and crew confirmed +	41		
7-Feb	30 more passenger and crew confirmed +	61		
8-Feb	9 more passenger and crew confirmed +	70		
10-Feb	66 more passenger and crew confirmed +	136		439 tes
11-Feb	39 more passenger and crew confirmed +	175		492 tes
12-Feb	28 more passenger and crew confirmed +	203		4 in IC
13-Feb	15 more passenger and crew confirmed +	218		713 tes
14-Feb	67 more passenger and crew confirmed +	285		927 tes
15-Feb	70 more passenger and crew confirmed +	355		1,211 tested; asymptomatic
16-Feb	329 American evacuated from cruise ship (14 of the evacuees found to be +) 61 Americans remained on board 44 Americans remained hospitalized in Japan	369		
17-Feb	85 more passenger and crew confirmed +	454		1,721 tested; serious
18-Feb	167 more passenger and crew confirmed +	621		3,011 tes
19-Feb	2 deaths	621	2	
20-Feb	13 more passenger and crew confirmed +	634	2	Evaluation Created Aspose.H Copyright 20 Aspose Pty seriously ill asymptomatic

23-Feb	Death reported in Japan		3	
24-Feb	Japan updates total to 691; US reports 36 in US	691	3	
25-Feb	Death reported in Japan; US reports 40 in US; UK 4; Australia 7; Hong Kong 4; Israel 2; Total 744; plus 4 not on ship	734	4	3,89 tested; seriously ill asymptomatic
26-Feb	US reports total of 42 cases in US; Japan announces that 45 of 813 former passengers have symptoms and will need to be tested; 14 new cases confirmed in the Diamond Princess cruise ship, raising the total to 705 cases inside the ship	750	4	
27-Feb	Australia (+1) 8 cases (repatriated)	751	4	
28-Feb	2 death reported in Japan	751	6	

As a check on deaths, I applied the age specific death rates per 100,000 population for the entire veteran population of 19M (90% male)

AGE	2019 VetPop	2017 Male All Cause Mortality per 100,000	Estimated 2017 All Cause Deaths
20 to 24 years	262,415	137.9	362
25 to 29 years	670,058	171.3	1,148
30 to 34 years	933,598	196.3	1,833
35 to 39 years	1,055,447	227.1	2,397
40 to 44 years	1,004,755	273.6	2,749
45 to 49 years	1,189,750	387.3	4,608
50 to 54 years	1,457,440	604.4	8,809
55 to 59 years	1,712,347	919.5	15,745
60 to 64 years	1,867,136	1,328.3	24,801
65 to 69 years	1,868,263	1,831.8	34,223

70 to 74 years	2,703,684	2,668.0	72,134
75 to 79 years	1,701,867	4,193.7	71,371
80 to 84 years	1,187,331	6,901.6	81,945
85 years and over	1,595,611	14,689.2	234,383
Total population	19,209,704	863.8	556,507

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Sent Date:	2020/03/01 22:28:44
Delivered Date:	2020/03/01 22:30:22

From:	White House: Office of the Vice President <info@mail.whitehouse.gov>
To:	Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd. (FYDIBOHF23SPDLT)/cn=Recipients/cn=d145efc9c35c4865aca6e9d47786b204-Harrison, B>
Subject:	VP DAILY GUIDANCE AND PRESS SCHEDULE FOR MONDAY, MARCH 2, 2020
Date:	2020/03/01 22:30:38
Priority:	Normal
Type:	Note

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The White House

Office of the Vice President

FOR IMMEDIATE RELEASE

March 1, 2020

DAILY GUIDANCE AND PRESS SCHEDULE FOR MONDAY, MARCH 2, 2020

Pool Coverage

TV: CBS News

Photos: Reuters, AP

EST

**10:25 AM THE VICE PRESIDENT delivers remarks to the American Israel
Public Affairs Committee Policy Conference**

Washington, D.C.

Pre-Credentialed Press

12:00 PM THE VICE PRESIDENT participates in a video teleconference call with Governors on the Coronavirus

Situation Room

Closed Press

12:45 PM THE VICE PRESIDENT has lunch with THE PRESIDENT

Private Dining Room

Closed Press

3:00 PM THE PRESIDENT, VICE PRESIDENT and Members of the Coronavirus Task Force meet with pharmaceutical executives

Cabinet Room

Closed Press

4:00 PM THE VICE PRESIDENT leads a White House Coronavirus Task Force meeting

Situation Room

Closed Press

5:00 PM THE VICE PRESIDENT and Ambassador Deborah Birx conduct a

briefing on the Coronavirus

Press Briefing Room

Pre-Credentialed Press

###

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Sender:	White House: Office of the Vice President <info@mail.whitehouse.gov>
Recipient:	Harrison, Brian (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d145efc9c35c4865aca6e9d47786b204-Harrison, B>
Sent Date:	2020/03/01 22:30:07
Delivered Date:	2020/03/01 22:30:38

From:	OS Secretarys Operations Center </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=32B1F28D808B43B6903C00083291303E-SECRETARYS>
To:	OS Secretarys Operations Center </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=32b1f28d808b43b6903c00083291303e-Secretarys>
Subject:	Update Summary: Second COVID-19 Presumptive Case, Rhode Island
Date:	2020/03/01 22:35:50
Priority:	Normal
Type:	Note

UNCLASSIFIED // FOR OFFICIAL USE ONLY

Good evening Dr. Kadlec,

BLUF: The Rhode Island Department of Health (RIDOH) laboratories have identified a second presumptive positive case of coronavirus disease 2019 (COVID-19), and a separate person has been tested for COVID-19 today.

- The presumptive positive case is a teenager. She is at home with mild symptoms.
- The person being tested is in her 30s and is also at home with mild symptoms.
- These two individuals went on the same trip to Europe in mid-February as the male in his 40s who RIDOH announced this morning as Rhode Island's first presumptive positive case of COVID-19.
- Saint Raphael Academy, which organized the trip to Europe in mid-February, will be closed for the remainder of this week.
- All 38 of the people who went on this trip will be self-monitoring for symptoms at home for 14 days with public health supervision. They have been instructed to not go to school or work and to remain at home for these 14 days.
- According to RIDOH, the Centers for Disease Control and Prevention (CDC) is managing contact tracing for people on the return flight that these three individuals took back to the United States.
- CDC EOC has confirmed their PUI team is aware of the situation.

RIDOH Press Release - <https://www.ri.gov/press/view/37821>

The SOC will continue to monitor this incident and report as needed. *This notification was sent to the SOC ASPR SLT distribution list.*

Very Respectfully,

Secretary's Operations Center

U.S. Department of Health and Human Services (HHS)
Assistant Secretary for Preparedness and Response (ASPR)
200 Independence Ave. S.W.
Washington D.C. 20201
Office (202) 619-7800
Fax: 800-514-4256
Email: hhs.soc@hhs.gov



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To:	OS Secretarys Operations Center </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=32b1f28d808b43b6903c00083291303e-Secretarys>
Subject:	Update Summary: Second COVID-19 Presumptive Case, Rhode Island
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Very Respectfully,

Secretary's Operations Center

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Fax: 800-514-4256
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Sender:	OS Secretarys Operations Center </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=32B1F28D808B43B6903C00083291303E-SECRETARYS>
Recipient:	OS Secretarys Operations Center </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=32b1f28d808b43b6903c00083291303e-Secretarys>
Sent Date:	2020/03/01 22:35:48
Delivered Date:	2020/03/01 22:35:50

From:	Callahan, Michael V., M.D. <(b)(6)>@mgh.harvard.edu>
To:	Lawler, James V <(b)(6)>@unmc.edu; Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f3bd10f7e82440f282361d80de6b8c1f-William.Wal>
CC:	Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Callahan, Michael V., M.D. <(b)(6)>@mgh.harvard.edu>
Subject:	Title changed: Flight 1 and flight 2 discordance in PCR + results
Date:	2020/03/02 02:38:59
Priority:	Normal
Type:	Note

James, thanks

Bill, there is no US data as yet to support the poo theory for COVID19, however there is heaps of data on other CoV viruses. We have kept this issue to ourselves while otehrs corroborate data. James results will prove very helpful.

At this time here is what we know:

1. • CoV are firstmost zoonotic enteropathies, basically diarrheal diseases of wildlife and mammalian food animals.
2. • The two other human CoV, especially SARS CoV1 caused fulminant diarrhea. While at the Hong Kong outbreak our co workers had massive exposures to watery diarrhea similar to the 2014 Ebola outbreak and many were infected despite N95, full PTE (back then) and googles. Fecal was implicated due to the high viral load measured.
3. • COVID19 is closely related to SARS CoV 1, which has better community transmission data supporting "fecal lofting" on thermal and convective currents as occurred in the infamous Amoy Garden residence. Here, virus was recovered outside buildings, high on the central clerestory.
4. • F-O transmission was also prven in 100s of cases lacking alternative primary contacts, aside from a number of shared washrooms, each of which was PCR and or virus cultures positive.
5. • Our colleauges at LeiShenShan Hospital have multiple cases of washroom acquired infection among faculty and among cohorts of 12 bunking medical students sharing a single bathroom who had one symptomatic student, vs. other 12 bed dorms remaining clean, with no transmission among students.
6. • Airframe NK01K had only 2 privies for 189 people, Airframe 2 had 4. Ours were frequently contaminated by diarrhea, angering passengers, and exhausting our single Phoenix Air hygiene officer. Seperating the PCR and symptomatic contacts worked with supervision-worked for about the first 8 hours of flight, until the non-PCR positive privie, serving over 170 passengers became foul, forcing passengers to use the PCR + privy located immediately adjacent. Supervision degraded as I dealt with numerous other problems (multiple falls, syncope, panic attack, ACS, and onset of fever among previously symptom-negative passengers).

I think my weak link was the shortage of privies on my plane (Flight 1; 2 privies) which was carrying more passengers than flight 2 (4 privies). In Immune Aircraft (Scott AFB protocol) the SOP is to deplane passengers up-loft, with contaminated passengers exiting behind low risk and asymptomatic passengers. Deplaning all passengers down loft, past the now overflowing pit privies, was not my preference, but I was too busy hammering the CDC guys that were contaminating my aircraft and trying to get a CDC physician to sign out my symptomatic patients, one of whom was quite ill.

I am happy to discuss. It was a complicated op, but together we got them home and I am proud to have been a part of that operation and part of this team.

mc

From: Lawler, James V. (b)(6)@unmc.edu>

Sent: Sunday, March 1, 2020 11:19 PM

To: Walters, William <WaltersWA2@state.gov>; Callahan, Michael V., M.D.

(b)(6)@mgh.harvard.edu>

Cc: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>

Subject: Re: Red Dawn Rising Start Feb 29

External Email - Use Caution

I will provide my 2 cents until Michael chimes in...

Poo was a proven mechanism of transmission for SARS, obvi. A number of COVID-19 cases have had fecal/rectal swab detection of virus genome (not sure about viral culture). These data come from NCID in Singapore as well as at least one publication I read. Do think it is feasible as an explanation for discrepancy between # + on the two aircraft. We should know more soon, as we are studying rectal swabs and toilet contamination in our cohort in Omaha.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Walters, William" <WaltersWA2@state.gov>

Date: Sunday, March 1, 2020 at 7:52 PM

To: "Callahan, m." (b)(6)@mgh.harvard.edu>

Cc: "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, "Lawler, James V"

(b)(6)@unmc.edu>

Subject: RE: Red Dawn Rising Start Feb 29

Non-UNMC email

Mike,

First heard on your poo theory. Care to share what you're talking about?

William A. Walters, M.D., MBA

Executive Director and

Managing Director for Operational Medicine

Bureau of Medical Services
U.S. Department of State
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SENSITIVE BUT UNCLASSIFIED

From: Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>
Sent: Sunday, March 1, 2020 7:17 PM
To: Tracey McNamara <(b)(6)@westernu.edu>; Lawler, James V <(b)(6)@unmc.edu>; Dr. Eva K Lee <evalee-gatech@pm.me>
Cc: WILKINSON, THOMAS <THOMAS.WILKINSON@hq.dhs.gov>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Carter Mecher <(b)(6)@charter.net>; Marcozzi, David <(b)(6)@som.umaryland.edu>; Tom Bossert <(b)(6)@me.com>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Baric, Ralph S <(b)(6)@email.unc.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Martin, Gregory J <MartinGJ@state.gov>; Walters, William <WaltersWA2@state.gov>; HAMILTON, CAMERON <(b)(6)@hq.dhs.gov>; <(b)(6)@gmail.com>; Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Lisa Koonin <(b)(6)@gmail.com>; HARVEY, MELISSA <(b)(6)@hq.dhs.gov>; WOLFE, HERBERT <(b)(6)@hq.dhs.gov>; Eastman, Alexander <(b)(6)@hq.dhs.gov>; EVANS, MARIEFRED <(b)(6)@associates.hq.dhs.gov>; <(b)(6)@UTMB.EDU>; Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Borio, Luciana <LBorio@iq.t.org>; Hanfling, Dan <DHanfling@iq.t.org>; McDonald, Eric (San Diego County) <Eric.McDonald@sdcounty.ca.gov>; Wade, David <(b)(6)@hq.dhs.gov>; TARANTINO, DAVID A <(b)(6)@cbp.dhs.gov>; david.gruber@dshs.texas.gov; KAUSHIK, SANGEETA <(b)(6)@hq.dhs.gov>; Lee, Scott <Scott.Lee@hhs.gov>; Padget, Larry G <PadgetLG@state.gov>; Ryan Morhard <Ryan.Morhard@weforum.org>; Stack, Steven J (tCHFStDPH) <steven.stack@ky.gov>; Adams, Jerome (HHS/OASH) <Jerome.Adams@hhs.gov>; Fantinato, Jessica - OHS, Washington, DC <jessica.fantinato@usda.gov>; Colby, Michelle - OHS, Washington, DC <michelle.colby@usda.gov>; <(b)(6)@usuhs.edu>; Danny Shiau <dshiau@cghe.org>; richard.hunt@hhs.gov; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>
Subject: Re: Red Dawn Rising Start Feb 29

Some questions regarding DECON of COVID19 prompted my recover of 18-year old studies on SARS CoV.

The full report is FOUO and under DIRO.

The importance is COVID19, like SARS CoV is transmitted by droplet, fomite and fecal sources (insists our Chinese colleagues).

Two of us on Diamond Princess Evac suspect that a overused portapotty on plane 1 is likley responsible for the bump in cases among repatriated DP passengers. Only Plane 1 had this bump. I find poo suspicious.

The attached document summarizes detials for the DARPA Director in Nov 2002, duriing the ongoing infecition. Data is from the DSO Immune Buildings program and incldues US and HK performers. Key focus areas are the following;

1. • SARS CoV recovery of patient contaminated rooms using different protocols
2. • the failure of FluProof Hospitals program, which is shown to be have 64% impact in reducing flu duiring peak transmisison among 1000 worker cohorts for 120-days with over 280K worker transmission days reviewed (at taxpayer cost of \$16M)
3. • Validation using a animal CoV virus plaque model repeated under controled conditions in several BL2 laboratories.

Please feel free to find more updated work on DECON for CoV. No one has done much since the 2002 Final report.

One interesting finding is the focus on ***Cov outbreaks decreasing when seasons become hot and humid.*** Our Chinese and Singapore colleagues believe this helps to protect the devleoping tropics against respiratory coronaviruses. An interesiting point that may be supported by forthcoming COVID19 epidemiology

From: Tracey McNamara <(b)(6)@westernu.edu>
Sent: Sunday, March 1, 2020 4:38 PM
To: Lawler, James V <(b)(6)@unmc.edu>; Dr. Eva K Lee <evalee-gatech@pm.me>
Cc: WILKINSON, THOMAS <(b)(6)@hq.dhs.gov>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Carter Mecher <(b)(6)@charter.net>; Marcozzi, David <(b)(6)@som.umaryland.edu>; Tom Bossert <(b)(6)@me.com>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Baric, Ralph S <(b)(6)@email.unc.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Martin, Gregory J <MartinGJ@state.gov>; Walters, William <WaltersWA2@state.gov>; HAMILTON, CAMERON <(b)(6)@hq.dhs.gov>; <(b)(6)@gmail.com> <(b)(6)@gmail.com>; Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Lisa Koonin <(b)(6)@gmail.com>; HARVEY, MELISSA <(b)(6)@hq.dhs.gov>; WOLFE, HERBERT <(b)(6)@hq.dhs.gov>; Eastman, Alexander <(b)(6)@hq.dhs.gov>; EVANS, MARIEFRED <(b)(6)@associates.hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; <(b)(6)@UTMB.EDU> <(b)(6)@utmb.edu>; Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John

(OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Borio, Luciana <LBorio@iq.t.org>; Hanfling, Dan <DHanfling@iq.t.org>; McDonald, Eric (San Diego County) <Eric.McDonald@sdcounty.ca.gov>; Wade, David <(b)(6)@hq.dhs.gov>; TARANTINO, DAVID A <(b)(6)@cbp.dhs.gov>; david.gruber@dshs.texas.gov <david.gruber@dshs.texas.gov>; KAUSHIK, SANGEETA <(b)(6)@hq.dhs.gov>; Lee, Scott <Scott.Lee@hhs.gov>; Padget, Larry G <PadgetLG@state.gov>; Ryan Morhard <Ryan.Morhard@weforum.org>; Stack, Steven J (tCHFStDPH) <steven.stack@ky.gov>; Adams, Jerome (HHS/OASH) <Jerome.Adams@hhs.gov>; Fantinato, Jessica - OHS, Washington, DC <jessica.fantinato@usda.gov>; Colby, Michelle - OHS, Washington, DC <michelle.colby@usda.gov>; <(b)(6)@usuhs.edu> <(b)(6)@usuhs.edu>; Danny Shiau <dshiau@cghe.org>; richard.hunt@hhs.gov <richard.hunt@hhs.gov>

Subject: Re: Red Dawn Rising Start Feb 29

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<https://www.sciencedirect.com/science/article/pii/S1286457920300344>
[\[gcc01.safelinks.protection.outlook.com\]](https://gcc01.safelinks.protection.outlook.com)

Interesting article on ADE and why we are seeing deaths
primarily in China
Tracey

Get Outlook for Android [\[gcc01.safelinks.protection.outlook.com\]](https://gcc01.safelinks.protection.outlook.com)

From: Dr. Eva K Lee <evalee-gatech@pm.me>

Sent: Sunday, March 1, 2020 1:01:33 PM

To: Lawler, James V <(b)(6)@unmc.edu>

Cc: WILKINSON, THOMAS <THOMAS.WILKINSON@hq.dhs.gov>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Tracey McNamara <(b)(6)@westernu.edu>; Carter Mecher <(b)(6)@charter.net>; Marcozzi, David <(b)(6)@som.umaryland.edu>; Tom Bossert <(b)(6)@me.com>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Baric, Ralph S <(b)(6)@email.unc.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Martin, Gregory J <MartinGJ@state.gov>; Walters, William <WaltersWA2@state.gov>; HAMILTON, CAMERON <(b)(6)@hq.dhs.gov>; <(b)(6)@gmail.com> <(b)(6)@gmail.com>; Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Lisa Koonin <(b)(6)@gmail.com>; HARVEY, MELISSA <(b)(6)@hq.dhs.gov>; WOLFE, HERBERT <HERBERT.WOLFE@hq.dhs.gov>; Eastman, Alexander <(b)(6)@hq.dhs.gov>; EVANS, MARIEFRED <(b)(6)@associates.hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; <(b)(6)@UTMB.EDU> <(b)(6)@utmb.edu>; Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Borio, Luciana <LBorio@iq.t.org>; Hanfling, Dan <DHanfling@iq.t.org>; McDonald, Eric (San Diego County) <Eric.McDonald@sdcounty.ca.gov>; Wade, David <(b)(6)@hq.dhs.gov>; TARANTINO, DAVID A <(b)(6)@cbp.dhs.gov>; david.gruber@dshs.texas.gov <david.gruber@dshs.texas.gov>; KAUSHIK, SANGEETA

(b)(6)@hq.dhs.gov>; Lee, Scott <Scott.Lee@hhs.gov>; Padget, Larry G <PadgetLG@state.gov>; Ryan Morhard <Ryan.Morhard@weforum.org>; Stack, Steven J (tCHFStDPH) <steven.stack@ky.gov>; Adams, Jerome (HHS/OASH) <Jerome.Adams@hhs.gov>; Fantinato, Jessica - OHS, Washington, DC <jessica.fantinato@usda.gov>; Colby, Michelle - OHS, Washington, DC <michelle.colby@usda.gov>; (b)(6)@usuhs.edu <(b)(6)@usuhs.edu>; Danny Shiau <dshiau@cghe.org>; richard.hunt@hhs.gov <richard.hunt@hhs.gov>

Subject: Re: Red Dawn Rising Start Feb 29

Duane, last I talked to Delta on Feb 20, they are giving it out to all passengers. I think all universities have the hand sanitizers, and most big companies have installed them also, but small ones may not have it. The aquariums have them, but it is so far apart that most people may not have access when needed. But for home hygiene, that is probably what Tracey talks about -- there is no inventory in the stores now to buy any.

It is probably not asking too much to have it installed in every office, as a recommendation.

evalee-gatech@pm.me

<https://newton.isye.gatech.edu/DrLee/> [gcc01.safelinks.protection.outlook.com]

mobile: 404-432-6835

Sent with ProtonMail [gcc01.safelinks.protection.outlook.com] Secure Email.

Original Message

On Sunday, March 1, 2020 3:24 PM, Lawler, James V <(b)(6)@unmc.edu> wrote:

>60% alcohol sanitizer is adequate. We should remain evidence-based.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "WILKINSON, THOMAS" <(b)(6)@hq.dhs.gov>

Date: Sunday, March 1, 2020 at 1:34 PM

To: "Caneva, Duane" <(b)(6)@hq.dhs.gov>, Tracey McNamara <(b)(6)@westernu.edu>, "Dr. Eva K Lee" <evalee-gatech@pm.me>, Carter Mecher <(b)(6)@charter.net>

Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Tom Bossert <(b)(6)@me.com>, "Dean, Charity A@CDPH" <Charity.Dean@cdph.ca.gov>, "Lawler, James V" <(b)(6)@unmc.edu>, "Baric, Ralph S" <(b)(6)@email.unc.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Martin, Gregory J" <MartinGJ@state.gov>, "Walters, William" <WaltersWA2@state.gov>, "HAMILTON, CAMERON" <(b)(6)@hq.dhs.gov>, (b)(6)@gmail.com <(b)(6)@gmail.com>, "Dodgen, Daniel (OS/ASPR/SPPR)" <Daniel.Dodgen@hhs.gov>, "DeBord, Kristin (OS/ASPR/SPPR)" <Kristin.DeBord@hhs.gov>, "Phillips, Sally (OS/ASPR/SPPR)" <Sally.Phillips@hhs.gov>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, Lisa Koonin <(b)(6)@gmail.com>, "HARVEY, MELISSA" <(b)(6)@hq.dhs.gov>, "WOLFE,

HERBERT" <(b)(6)@hq.dhs.gov>, "Eastman, Alexander" <(b)(6)@hq.dhs.gov>, "EVANS, MARIEFRED" <(b)(6)@associates.hq.dhs.gov>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, <(b)(6)@UTMB.EDU" <(b)(6)@utmb.edu>, "Johnson, Robert (OS/ASPR/BARDA)" <Robert.Johnson@hhs.gov>, "Yeskey, Kevin" <kevin.yeskey@hhs.gov>, "Disbrow, Gary (OS/ASPR/BARDA)" <Gary.Disbrow@hhs.gov>, "Redd, John (OS/ASPR/SPPR)" <John.Redd@hhs.gov>, "Hassell, David (Chris) (OS/ASPR/IO)" <David.Hassell@hhs.gov>, "Hamel, Joseph (OS/ASPR/IO)" <Joseph.Hamel@hhs.gov>, "Borio, Luciana" <LBorio@iqt.org>, Dan Hanfling <DHanfling@iqt.org>, "McDonald, Eric (San Diego County)" <Eric.McDonald@sdcounty.ca.gov>, "Wade, David" <(b)(6)@hq.dhs.gov>, "TARANTINO, DAVID A" <(b)(6)@cbp.dhs.gov>, "david.gruber@dshs.texas.gov" <david.gruber@dshs.texas.gov>, "KAUSHIK, SANGEETA" <(b)(6)@hq.dhs.gov>, "Lee, Scott" <Scott.Lee@hhs.gov>, "Padget, Larry G" <PadgetLG@state.gov>, Ryan Morhard <Ryan.Morhard@weforum.org>, "Stack, Steven J (CHFStDPH)" <steven.stack@ky.gov>, "Adams, Jerome (HHS/OASH)" <Jerome.Adams@hhs.gov>, "Fantinato, Jessica - OHS, Washington, DC" <jessica.fantinato@usda.gov>, "Colby, Michelle - OHS, Washington, DC" <michelle.colby@usda.gov>, <(b)(6)@usuhs.edu" <(b)(6)@usuhs.edu>, Danny Shiau <dshiau@cghe.org>, "richard.hunt@hhs.gov" <richard.hunt@hhs.gov>
Subject: Re: Red Dawn Rising Start Feb 29

Non-UNMC email

Not sure hand sanitizers would work here, since alcohol works primarily as a desiccant, and this virus appears capable of lasting for days on dry fomites. A 10% bleach solution would be better, I'd imagine. Or just the mechanics washing hands with soap and water while singing the abc's. Twice.

Thomas M. Wilkinson, MD
Chief Medical Information Officer
Department of Homeland Security
Desk: 202-254-7149
Cell: <(b)(6)>
<(b)(6)@hq.dhs.gov

Sent from my mobile device.
Please forgive typos and brevity.

From: Caneva, Duane <(b)(6)@hq.dhs.gov>
Sent: Sunday, March 1, 2020 2:25:53 PM
To: Tracey McNamara <(b)(6)@westernu.edu>; Dr. Eva K Lee <evalee-gatech@pm.me>; Carter Mecher <(b)(6)@charter.net>
Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Tom Bossert <(b)(6)@me.com>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Lawler, James V <(b)(6)@unmc.edu>; Baric, Ralph S <(b)(6)@email.unc.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Martin, Gregory J <MartinGJ@state.gov>; Walters, William <WaltersWA2@state.gov>; HAMILTON, CAMERON <(b)(6)@hq.dhs.gov>;

(b)(6)@gmail.com <(b)(6)@gmail.com>; Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Lisa Koonin <(b)(6)@gmail.com>; HARVEY, MELISSA <(b)(6)@hq.dhs.gov>; WOLFE, HERBERT <(b)(6)@hq.dhs.gov>; Eastman, Alexander <(b)(6)@hq.dhs.gov>; EVANS, MARIEFRED <(b)(6)@associates.hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; <(b)(6)@UTMB.EDU> <(b)(6)@utmb.edu>; Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Borio, Luciana <LBorio@iq.t.org>; Hanfling, Dan <DHanfling@iq.t.org>; McDonald, Eric (San Diego County) <Eric.McDonald@sdcounty.ca.gov>; Wade, David <(b)(6)@hq.dhs.gov>; TARANTINO, DAVID A <(b)(6)@cbp.dhs.gov>; WILKINSON, THOMAS <(b)(6)@hq.dhs.gov>; david.gruber@dshs.texas.gov <david.gruber@dshs.texas.gov>; KAUSHIK, SANGEETA <(b)(6)@hq.dhs.gov>; Lee, Scott <Scott.Lee@hhs.gov>; Padget, Larry G <PadgetLG@state.gov>; Ryan Morhard <Ryan.Morhard@weforum.org>; Stack, Steven J (CHFStDPH) <steven.stack@ky.gov>; Adams, Jerome (HHS/OASH) <Jerome.Adams@hhs.gov>; Fantinato, Jessica - OHS, Washington, DC <jessica.fantinato@usda.gov>; Colby, Michelle - OHS, Washington, DC <michelle.colby@usda.gov>; <(b)(6)@usuhs.edu> <(b)(6)@usuhs.edu>; Danny Shiau <dshiau@cghe.org>; richard.hunt@hhs.gov <richard.hunt@hhs.gov>
Subject: RE: Red Dawn Rising Start Feb 29

Do we know the distribution and use of hand sanitizer dispensers in public spaces, schools, businesses, workplaces, gyms?
Something for guidance?

From: Tracey McNamara <(b)(6)@westernu.edu>
Sent: Sunday, March 1, 2020 2:16 PM
To: Dr. Eva K Lee <evalee-gatech@pm.me>; Carter Mecher <(b)(6)@charter.net>
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Subject: Re: Red Dawn Rising Start Feb 29

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FYI, Costco was limiting purchases of water yesterday in Rancho Cucamonga, CA (near LA). Target has been out of hand sanitizer for weeks.

Tracey

Get Outlook for Android [aka.ms] [gcc01.safelinks.protection.outlook.com]

From: Carter Mecher <(b)(6)@charter.net>

Sent: Sunday, March 1, 2020 10:18:47 AM

To: Dr. Eva K Lee <evalee-gatech@pm.me>

Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Tom Bossert <(b)(6)@me.com>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Lawler, James V <(b)(6)@unmc.edu>; Tracey McNamara <(b)(6)@westernu.edu>; Baric, Ralph S <(b)(6)@email.unc.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Martin, Gregory J <MartinGJ@state.gov>; Walters, William <WaltersWA2@state.gov>; HAMILTON, CAMERON <(b)(6)@hq.dhs.gov>; <(b)(6)@gmail.com> <(b)(6)@gmail.com>; Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Lisa Koonin <(b)(6)@gmail.com>; HARVEY, MELISSA <(b)(6)@hq.dhs.gov>; WOLFE, HERBERT <(b)(6)@hq.dhs.gov>; Eastman, Alexander <(b)(6)@hq.dhs.gov>; EVANS, MARIEFRED <(b)(6)@associates.hq.dhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; <(b)(6)@UTMB.EDU> <(b)(6)@utmb.edu>; Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>;

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Subject: RE: Red Dawn Rising Start Feb 29

Agree Eva. I would pull the triggers on NPIs (meaning I would implement them now). Not sure what we gain from waiting. Basically CA and Seattle have effectively closed schools on Friday (by virtue of a weekend)—the decision is whether to reopen them on Monday.

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From: Dr. Eva K Lee

Sent: Sunday, March 1, 2020 1:10 PM

To: Carter Mecher

Cc: Marcozzi, David; Caneva, Duane; Tom Bossert; Dean, Charity A@CDPH; Lawler, James V; Tracey McNamara; Baric, Ralph S; Richard Hatchett; Martin, Gregory J; Walters, William; HAMILTON, CAMERON; <(b)(6)@gmail.com>; Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Hepburn, Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; Callahan, Michael V., M.D.; <(b)(6)@UTMB.EDU>; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Borio, Luciana; Hanfling, Dan; McDonald, Eric (San Diego County); Wade, David; TARANTINO, DAVID A; WILKINSON, THOMAS; david.gruber@dshs.texas.gov; KAUSHIK, SANGEETA; Lee, Scott; Padget, Larry G; Ryan Morhard; Stack, Steven J (CHFStDPH); Adams, Jerome (HHS/OASH); Fantinato, Jessica - OHS, Washington, DC; Colby, Michelle - OHS, Washington, DC; <(b)(6)@usuhs.edu>; Danny Shiau; richard.hunt@hhs.gov

Subject: RE: Red Dawn Rising Start Feb 29

Don't know if we need more triggers now that there's confirmed community spread already in Seattle, and sites in California. It is particularly serious because it involves all these "special" populations -- the young, the elderly, and the healthcare workers.

By the way, although it's Chinese New Year and hence easy to close schools, but I was told public places were jammed with people (bumper to bumper) because of celebration and all sort of things. The moment the schools were closed, all public crowds disappeared. Not that they're required yet, public situation awareness kicks in high gear and everyone practices.

Totally old news but it helps to contrast the CFR against case ascertainment. S Korean screened 10,000 per day.

Number of tests and positivity rate for Covid-19 as of Feb. 26

- UK: **7,132 concluded tests**, of which **13 positive (0.2% positivity rate)**. [source [twitter.com] [gcc01.safelinks.protection.outlook.com]]
- Italy: **9,462 tests**, of which **470 positive**, awaiting results: unknown (**at least 5.0% positivity rate**). [source [repubblica.it] [gcc01.safelinks.protection.outlook.com]]
- France: **762 tests**, of which **17 positive**, 179 awaiting results (**at least 2.2% positivity rate**). [source [santepubliquefrance.fr] [gcc01.safelinks.protection.outlook.com]]
- Austria: **321 tests**, of which **2 positive**, awaiting results: unknown (**at least 0.6% positivity rate**). [source [sozialministerium.at] [gcc01.safelinks.protection.outlook.com]]
- South Korea: **66,652 tests** with 1766 positives 25,568 awaiting results (**4.3% positivity rate**). [source [cdc.go.kr] [gcc01.safelinks.protection.outlook.com]]
- United States: **445 concluded tests**, of which **14 positive (3.1% positivity rate)**. [source [cdc.gov] [gcc01.safelinks.protection.outlook.com]]

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Original Message

On Sunday, March 1, 2020 12:54 PM, Carter Mecher <(b)(6)@charter.net> wrote:

Once surveillance revs up and we begin confirming community transmission, the next question will be when to pull the trigger on NPIs.

The answer—before prevalence is 1%. If you wait until after 1%, you will look more like Wuhan today or Philadelphia in 1918.

But think of what that means. For a population of 1M, 1% = 10,000. Seems like a big number and something we should easily recognize well before we hit the 1% threshold where NPIs lose their effectiveness.

But it is not as simple as one might imagine.

Let's use the current cruise ship data (attack rate of 20%; 50% of infected asymptomatic; 12% of infected acutely ill; 2% of infected critically ill; CFR = 0.9%). But remember that the cruise ship population is an aged group (overrepresentation of the elderly). Kids and young adults (who have much more mild disease) are underrepresented in the cruise ship population. As a rough approximation, let's assume that the CFR of the cruise ship applied to the younger general population would need to be cut in half to 0.4%.

Let's assume that this epidemic is tripling in size each week and that the time from illness onset to death is in the range of about 3 weeks. If have a CFR of 0.4%, it means we roughly have a total number infected of ~250 for each death (assuming the death has no linkage to other known cases in the community—so not a death of one of the cruise ship passengers). But that denominator was from 3 weeks earlier--meaning that the current number infected at the time you notice the first death is in on the order of $27 \times 250 = 6,750$ infected individuals circulating in the community. Once you have 2 deaths, you just clicked past the 1% threshold of 10,000 infected. This is for a population of 1M.

So now let's think about picking up serious illness. Let's assume that instead of the 2% estimate of critical illness for the cruise ship population, the % is cut in half to 1% as we add in the underrepresented kids and young adults who would be expected to have mild disease. Let's also assume that time from onset of infection to critical illness is 2 weeks. If we identify someone who is critically ill (again, someone with no linkage to a known case—so not a cruise ship passenger), we would expect there are 100 infected individuals circulating in the community. But that estimate was from two weeks earlier when the index patient first became infected. Assuming cases triple each week (so a 9-fold increase in 2 weeks), the current number of infected is ~900. Within two weeks the number of cases will be approaching 10,000—meaning that once you identify a critically ill individual, you have about 2 weeks before the window closes. This assumes you didn't miss any other critically ill cases at other hospitals (or recent deaths) and this was truly the first critically ill case. The question is how confident are you? The recent case in CA was in the ICU for at least a week—meaning the window there is cut in half or more (you likely have days to make a decision). Again, this is for a population of 1M.

Lastly, think of those 10,000 infected. On the cruise ship more than half were asymptomatic. Given that kids and young adults have even milder disease, perhaps the % asymptomatics is as high as 80%? That means the threshold has decreased to just 2,000 symptomatics (and a significant portion of these have mild disease and might fly below the radar). Given that we are in the middle of a flu season much of this disease could be hidden among the numbers of ILI cases we see every day (and the lack of testing and the limited PUI definition for testing pretty much excluded the ability to identify these individuals).

Bottom line, I would pull the trigger when a death is identified and pull the trigger pretty quickly once you find a critically ill individual (wouldn't wait more than 1 week).

More background if you are interested.

The attached Word file is a very brief story of the difference between Philadelphia and St. Louis (for reference I attached the paper looking at NPIs during 1918). Bottom line is that during the 1918 pandemic, cities in which multiple interventions were implemented at an early phase of the epidemic had peak death rates ~50% lower than those that did not.

The difference between Philadelphia and St. Louis in 1918 in terms when they pulled the trigger on NPIs was about two weeks during the course of their individual outbreaks.

In St. Louis, NPIs were put in place 1 week after the first cases at Jefferson Barracks, 5 days after the first death, and 3 days after the first civilian cases in St. Louis. In Philadelphia, NPIs

were put in place 3 weeks after the first cases at the Navy Yard, 16 days after the first civilian cases in Philadelphia, 2 weeks after the first death. In the cases of NPIs, timing matters.

We would estimate that the outbreak in Wuhan had about a 2 week head start on the rest of Hubei. So the measures China implemented to slow transmission happened about two weeks later in the course of the outbreak in Wuhan compared to the rest of Hubei Province. And here is how they compare in terms of hospitalizations. Looks a lot like Philadelphia and St. Louis.

1% prevalence is considered to be the latest point where NPIs will be effective. That is the cutoff according to modelers (1%) for influenza (see below). Three modeling groups (Imperial College, University of Washington, and VBI) looked at three different R_0 levels (1.9, 2.4, and 3.0) and then compared the effectiveness of the mitigation measures to reduce attack rate with implementation of the measures when 0.0001% of the population was infected, then 0.001%, 0.01%, 0.1%, 1% and 10%. Measures needed to be implemented by 1%. Effect is more pronounced for lower R_0 . This disease probably has an R_0 between 2.4 and 3.0. You can see the reduction in attack rate going from implementing the measures at 1% vs 10%. (Paper is also attached for reference.)

Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd. Hong Kong (93 cases/2 deaths) and Singapore (102 cases/0 deaths) are continuing to hold the line. In contrast Italy has seen explosive growth since Feb 21 (from 3 cases/0 deaths to (1,128 cases/29 deaths).

Hong Kong confirmed its first case of a traveler from Wuhan on Jan 23 (symptom onset of Jan 18). They would later learn of their first case of local transmission with symptom onset on Jan 22. On Jan 25, within 1 week of the symptom onset of the first case of a traveler and within 3 days of symptom onset of the first local case, they were already taking actions like suspending the reopening of schools—they were a bit lucky because the schools were closed for the Chinese New Year. So they took aggressive actions within 1 week of first recognized case. There was a lot of activity in Hong Kong in the first 3 weeks of January (large number of suspected cases that they were monitoring but they only had syndromic surveillance since there were no diagnostics early on. As a result, Hong Kong had been busy isolating scores of patients during the first 3 weeks of January based only on clinical presentation.

Singapore confirmed its first case on January 23 (traveler from Wuhan). The individual had symptom onset on Jan 20 on a flight to Singapore. On Feb 3, Singapore confirmed its first case of local transmission. Symptom onset for that individual was on Jan 29. On Feb 7, Singapore identified additional cases of local transmission and declared Code Orange and intensified its response. So Singapore took aggressive action two weeks after confirmation of 1st case in a traveler and within 4 days of first case of local transmission.

Italy has emerged as a major exporter of COVID. Above the surface, nothing much was happening in Italy until Feb 21st (before that just a few cases reported, on Feb 20 Italy reported a

cumulative total of 3 cases/0 deaths). Over the past week things exploded and Italy has exported cases around the world. Things exploded in a matter of days (or at least were recognized to have exploded in a matter of days). Italy had to have had ongoing community transmission well before Feb 21st when things appeared to take off for the outbreak to take off this quickly (including 29 deaths) and to have the amount of spread across the globe in such a short period of time. I suspect that prevalence was much higher than anyone realized. Watching how aggressively they implemented NPIs including cordon sanitaire (within just a couple of days of the first deaths and the acceleration in the number of confirmed/suspected cases) and the continued explosive growth suggests to me that transmission was much more established and disease must have been much more prevalent. The lesson is that although things might have looked under control on Feb 20 (3 cases/0 deaths), things obviously weren't fine. They couldn't see how large the iceberg was below the water line. They were blind to the extent of disease and the extent of ongoing transmission.

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From: Carter Mecher

Sent: Sunday, March 1, 2020 10:24 AM

To: Marcozzi, David; Caneva, Duane; Dr. Eva K Lee; Tom Bossert; Dean, Charity A@CDPH; Lawler, James V; Tracey McNamara; Baric, Ralph S; Richard Hatchett; Martin, Gregory J; Walters, William; HAMILTON, CAMERON; (b)(6)@gmail.com; Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Hepburn, Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; Callahan, Michael V., M.D.; (b)(6)@UTMB.EDU; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Borio, Luciana; Hanfling, Dan; McDonald, Eric (San Diego County); Wade, David; TARANTINO, DAVID A; WILKINSON, THOMAS; david.gruber@dshs.texas.gov; KAUSHIK, SANGEETA; Lee, Scott; Padget, Larry G; Ryan Morhard; Stack, Steven J (CHFS DPH); Adams, Jerome (HHS/OASH); Fantinato, Jessica - OHS, Washington, DC; Colby, Michelle - OHS, Washington, DC; (b)(6)@usuhs.edu; Danny Shiau; richard.hunt@hhs.gov

Subject: RE: Red Dawn Rising Start Feb 29

Was able to find flu surveillance for Hong Kong and South Korea. Was interested in seeing if ILI would be of any value. Bottom line is I don't think so.

First, South Korea flu surveillance.

<https://www.cdc.go.kr/board/board.es?mid=a30504000000&bid=0033> [cdc.go.kr]
[gcc01.safelinks.protection.outlook.com]

We pulled the data for weeks 49-8 (it doesn't look like ILI is of much help). South Korea is having explosive growth and not seeing much on their ILI surveillance.

Week	ILI Rate	%Positive Samples for Influenza
49	19.5%	18.6%
50	28.5%	16.2%
51	37.8%	25.9%
52	49.8%	35.1%
1	49.1%	43.4%
2	47.8%	40.6%
3	42.4%	37.6%
4	40.9%	43.4%
5	28.0%	40.9%
6	16.4%	16.7%
7	11.6%	15.8%
8	8.5%	3.9%

Eva found Hong Kong flu surveillance.

https://www.chp.gov.hk/files/pdf/fluexpress_week8_27_2_2020_eng.pdf [chp.gov.hk]
[\[gcc01.safelinks.protection.outlook.com\]](https://gcc01.safelinks.protection.outlook.com)

This is data thru Feb 22 (week 8). Hong Kong is really do a good job of surveillance. And what they are doing in terms of NPIs seems to be working (just like Singapore).

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Subject: RE: Red Dawn Rising Start Feb 29

Seattle needs to pull the trigger on NPIs. They are at the very edge of the window for NPIs to be effective.

Wash. state sees 1st virus death in US, declares emergency

The governor of Washington declared a state of emergency Saturday after a man died there of COVID-19, the first such reported death in the United States. More than 50 people in a nursing facility are sick and being tested for the virus.

Gov. Jay Inslee directed state agencies to use “all resources necessary” to prepare for and respond to the coronavirus outbreak. The declaration also allows the use of the Washington National Guard, if necessary.

“We will continue to work toward a day where no one dies from this virus,” the governor vowed. Health officials in California, Oregon and Washington state are worried about the novel coronavirus spreading through West Coast communities because a growing number of people are being infected despite not having visited an area where there was an outbreak, nor apparently been in contact with anyone who had.

The man who died was in his 50s, had underlying health conditions and no history of travel or contact with a known COVID-19 case, health officials in Washington state said at a news conference. A spokesperson for EvergreenHealth Medical Center, Kayse Dahl, said the person died in the facility in the Seattle suburb of Kirkland.

Dr. Frank Riedo, medical director of Infection Control at Evergreen, said local hospitals are seeing people with severe coronavirus symptoms but it’s probable that there are more cases in the community.

“This is the tip of the iceberg,” he said.

The health officials reported two cases of COVID-19 virus connected to a long-term care facility in the same suburb, Life Care Center of Kirkland. One is a Life Care worker, a woman in her 40s

who is in satisfactory condition at a hospital, and the other is a woman in her 70s and a resident at Life Care who is hospitalized in serious condition. Neither had traveled abroad.

“In addition, over 50 individuals associated with Life Care are reportedly ill with respiratory symptoms or hospitalized with pneumonia or other respiratory conditions of unknown cause and are being tested for COVID-19,” Seattle and King County officials said. “Additional positive cases are expected.”

Overlake Medical Center in Bellevue, Washington, said a health care worker from Life Care is a patient at the hospital. The woman, who is in her 40s, was admitted to the hospital Thursday and is in stable condition, the center said.

Amy Reynolds of the Washington state health department said in a brief telephone interview: “We are dealing with an emergency evolving situation.”

No one answered the phone at Life Care, but Ellie Basham, its executive director, said in a statement that residents and employees are being monitored and those with symptoms or who were potentially exposed are quarantined. The facility has banned families, volunteers and vendors as a precaution, Basham said.

A growing number of cases in California, Washington state and Oregon are confounding authorities because the infected people hadn’t recently traveled overseas or had any known close contact with a traveler or an infected person.

The Santa Clara County Public Health Department announced Saturday the case of a fourth person in the county infected with coronavirus. The case is of a woman who is a “household contact” of a person who is hospitalized with the virus, the health department said in a news release.

The woman has not been hospitalized and is not ill, the department said.

In Oregon, the state’s Health Authority said Saturday that the second person who was tested for exposure to the virus doesn’t have it. The agency said in a statement that it “continues approving testing for persons under investigation, a number that’s likely to increase following the report of the state’s first presumptive case and new Centers for Disease Control and Prevention guidance that calls for testing of anyone experiencing severe respiratory symptoms.”

The U.S. has about 60 confirmed cases. Worldwide, the number of people sickened by the virus hovered Friday around 83,000, and there were more than 2,800 deaths, most of them in China. A 60-year-old U.S. citizen died in Wuhan in early February.

Most infections result in mild symptoms, including coughing and fever, though some can become more serious and lead to pneumonia. Older people, especially those with chronic illnesses such as heart or lung disease, are especially vulnerable. Health officials think it spreads mainly from droplets when an infected person coughs or sneezes, similar to how the flu spreads. The number of coronavirus cases in the United States is considered small. But convinced that they will grow, health agencies are ramping up efforts to identify those who might be sick. To achieve more rapid testing capacity, the U.S. Food and Drug Administration issued an accelerated policy Saturday enabling laboratories to use tests they develop. FDA Commissioner Stephen Hahn said his agency is “rapidly responding and adapting to this dynamic and evolving situation.”

The California Department of Public Health said Friday that the state will receive enough kits from the U.S. Center for Disease Control and Prevention to test up to 1,200 people a day for the COVID-19 virus — a day after Gov. Gavin Newsom complained to federal health officials that the state had already exhausted its initial 200 test kits.

Oregon was able to more quickly identify a case — an employee of an elementary school in Lake Oswego near Portland because it was able to test a sample locally. School district officials said Saturday the employee had been visited in the hospital by several people before he was diagnosed. Those individuals have been asked to observe a two-week quarantine and are being closely monitored.

Worried shoppers thronged a Costco box store near Lake Oswego, emptying shelves of items including toilet paper, paper towels, bottled water, frozen berries and black beans.

“Toilet paper is golden in an apocalypse,” one Costco employee said.

Employees said the store ran out of toilet paper for the first time in its history and that it was the busiest they had ever seen, including during Christmas Eve.

The district is deep-cleaning all its schools and all school buses with the goal of having students back in class Monday, said Superintendent Lora de la Cruz. But Forest Hills Elementary, where the man worked, is closed until Wednesday, marking two weeks since he was last at the school. Earlier U.S. cases include three people who were evacuated from the central China city of Wuhan, epicenter of the outbreak; 14 people who returned from China, or their spouses; and 42 American passengers on the Diamond Princess cruise ship, who were flown to U.S. military bases in California and Texas for quarantining.

The U.S. government looked at sending dozens of Californians, several of whom tested positive for the virus, who had been aboard the cruise ship to a state-owned facility in Costa Mesa, California. Local officials objected, saying they weren’t included in the planning and wanting to know what safeguards would be in place to prevent spread of the virus. The U.S. government said it didn’t need to use the facility after all.

At UC Davis Medical Center in California, at least 124 registered nurses and other health care workers were sent home for “self-quarantine” after a Solano County woman with the virus was admitted, National Nurses United, a nationwide union representing registered nurses, said Friday.

The case “highlights the vulnerability of the nation’s hospitals to this virus,” the union said. Washington state health officials announced two other new coronavirus cases Friday night, including a high school student who attends Jackson High School in Everett, said Dr. Chris Spitters of the Snohomish County Health District.

The other case in Washington was a woman in King County in her 50s who had recently traveled to South Korea, authorities said. Neither patient was seriously ill.

Sent from Mail [go.microsoft.com] [gcc01.safelinks.protection.outlook.com] for Windows 10

From: Carter Mecher

Sent: Sunday, March 1, 2020 8:14 AM

To: Marcozzi, David; Caneva, Duane; Dr. Eva K Lee; Tom Bossert; Dean, Charity A@CDPH; Lawler, James V; Tracey McNamara; Baric, Ralph S; Richard Hatchett; Martin, Gregory J; Walters, William; HAMILTON, CAMERON;(b)(6)@gmail.com; Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Hepburn, Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; Callahan, Michael V.,M.D.; (b)(6)@UTMB.EDU; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO);

Hamel, Joseph (OS/ASPR/IO); Borio, Luciana; Hanfling, Dan; McDonald, Eric (San Diego County); Wade, David; TARANTINO, DAVID A; WILKINSON, THOMAS; david.gruber@dshs.texas.gov; KAUSHIK, SANGEETA; Lee, Scott; Padget, Larry G; Ryan Morhard; Stack, Steven J (CHFS DPH); Adams, Jerome (HHS/OASH); Fantinato, Jessica - OHS, Washington, DC; Colby, Michelle - OHS, Washington, DC; (b)(6)@usuhs.edu; Danny Shiau; richard.hunt@hhs.gov

Subject: RE: Red Dawn Rising Start Feb 29

FYI. CDC released its guidance for healthcare facilities. You will recognize many of the things being discussed in this forum.

<https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/index.html> [cdc.gov]

[\[gcc01.safelinks.protection.outlook.com\]](https://gcc01.safelinks.protection.outlook.com)

Sent from Mail [go.microsoft.com] [gcc01.safelinks.protection.outlook.com] for Windows 10

From: Marcozzi, David

Sent: Sunday, March 1, 2020 8:07 AM

To: Carter Mecher; Caneva, Duane; Dr. Eva K Lee; Tom Bossert; Dean, Charity A@CDPH; Lawler, James V; Tracey McNamara; Baric, Ralph S; Richard Hatchett; Martin, Gregory J; Walters, William; HAMILTON, CAMERON; (b)(6)@gmail.com; Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Hepburn, Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; Callahan, Michael V.,M.D.; (b)(6)@UTMB.EDU; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Borio, Luciana; Hanfling, Dan; McDonald, Eric (San Diego County); Wade, David; TARANTINO, DAVID A; WILKINSON, THOMAS; david.gruber@dshs.texas.gov; KAUSHIK, SANGEETA; Lee, Scott; Padget, Larry G; Ryan Morhard; Stack, Steven J (CHFS DPH); Adams, Jerome (HHS/OASH); Fantinato, Jessica - OHS, Washington, DC; Colby, Michelle - OHS, Washington, DC; (b)(6)@usuhs.edu; Danny Shiau; richard.hunt@hhs.gov

Subject: Re: Red Dawn Rising Start Feb 29

To my response colleagues, a consideration.

The impact to our nation's healthcare system, delivering care to those who need it typically and to those who need it as a result of COVID-19, will be significant. It is likely you will push out guidance that you want hospitals to adopt, describing best practices to enact during a pandemic. The truth is, we are going to war with what we have. Hospitals will attempt to make changes to their care delivery system, but this type of change for healthcare colleagues who don't think like us every day, is difficult to digest and implement. That said, they are trying and changing as we face this threat together. With our window closing and to encourage more rapid adoption of improved readiness for our nation's healthcare delivery system, I have one request which has a multitude of effects. Additionally, as we are all aware, COVID-19 will mainly

affect the geriatric population and this tool will support that care directly. There is precedent to create a payment mechanism to incentivize care during a disaster.

A supplemental, pushed to states and then to localities won't move fast enough nor create the significant 'carrot' to pivot the system and CFOs realize this is one-time funding. One-time special grant funding does not encourage rapid, sustainable and substantial change. Simply, you can't grant your way to success. Businesses don't work that way and neither does healthcare.

The fix: Use the National Disaster Medical System (NDMS) Definitive Care Reimbursement Program (<https://protect2.fireeye.com/url?k=51386594-0d6c4cbf-513854ab-0cc47a6d17cc-1a74726e41888973&u=https://www.phe.gov/Preparedness/responders/ndms/definitive-care/Pages/default.aspx> [phe.gov] [gcc01.safelinks.protection.outlook.com]). Allow the PHE to enact this program without mandating NDMS involvement. Tie it to any claims linked to COVID-19. Assure that other payers follow suit. This change creates an incentive for surge and care for these patients. This change engages every component of the healthcare delivery system. This change synergizes completely with the financial mechanisms and processes this nation uses on a daily basis. This change doesn't create more administrative burden on facilities, grantees, grantors or states. This change can be enacted swiftly.

This change may help make a difference.

Yes, there will be CMS providers and suppliers that will try to abuse this preparedness tool. Assure that CMS's CPI is engaged prior to enacting.

From: Carter Mecher <(b)(6)@charter.net>
Date: Saturday, February 29, 2020 at 22:43
To: Duane Caneva <(b)(6)@hq.dhs.gov>, "Dr. Eva K Lee" <evalee-gatech@pm.me>, Tom Bossert <(b)(6)@me.com>, "Dean, Charity A@CDPH" <Charity.Dean@cdph.ca.gov>, James Lawler <(b)(6)@unmc.edu>, Tracey McNamara <(b)(6)@westernu.edu>, "Baric, Ralph S" <(b)(6)@email.unc.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Martin, Gregory J" <MartinGJ@state.gov>, "Walters, William" <WaltersWA2@state.gov>, "HAMILTON, CAMERON" <(b)(6)@hq.dhs.gov>, <(b)(6)@gmail.com> <(b)(6)@gmail.com>, "Dodgen, Daniel (OS/ASPR/SPPR)" <Daniel.Dodgen@hhs.gov>, "DeBord, Kristin (OS/ASPR/SPPR)" <Kristin.DeBord@hhs.gov>, "Phillips, Sally (OS/ASPR/SPPR)" <Sally.Phillips@hhs.gov>, David Marcozzi <(b)(6)@som.umaryland.edu>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Lisa Koonin <(b)(6)@gmail.com>, "HARVEY, MELISSA" <(b)(6)@hq.dhs.gov>, "WOLFE, HERBERT" <HERBERT.WOLFE@hq.dhs.gov>, "Eastman, Alexander" <(b)(6)@hq.dhs.gov>, "EVANS, MARIEFRED" <(b)(6)@associates.hq.dhs.gov>, <(b)(6)@mgh.harvard.edu> <(b)(6)@mgh.harvard.edu>, <(b)(6)@UTMB.EDU" <jwleduc@utmb.edu>, "Johnson, Robert (OS/ASPR/BARDA)" <Robert.Johnson@hhs.gov>, Kevin Yeskey <kevin.yeskey@hhs.gov>, "Disbrow, Gary (OS/ASPR/BARDA)" <Gary.Disbrow@hhs.gov>, "Redd, John (OS/ASPR/SPPR)" <John.Redd@hhs.gov>, "Hassell, David (Chris)

(OS/ASPR/IO)" <David.Hassell@hhs.gov>, "Hamel, Joseph (OS/ASPR/IO)" <Joseph.Hamel@hhs.gov>, "Borio, Luciana" <LBorio@iqт.οrg>, "Hanfling, Dan" <DHanfling@iqт.οrg>, "McDonald, Eric (San Diego County)" <Eric.McDonald@sdcounty.ca.gov>, "Wade, David" <(b)(6)@hq.dhs.gov>, "TARANTINO, DAVID A" <(b)(6)@cbp.dhs.gov>, "WILKINSON, THOMAS" <(b)(6)@hq.dhs.gov>, "david.gruber@dshs.texas.gov" <david.gruber@dshs.texas.gov>, "KAUSHIK, SANGEETA" <(b)(6)@hq.dhs.gov>, "Lee, Scott" <Scott.Lee@hhs.gov>, "Padget, Larry G" <PadgetLG@state.gov>, Ryan Morhard <Ryan.Morhard@weforum.org>, "Stack, Steven J (CHFS DPH)" <steven.stack@ky.gov>, "Adams, Jerome (HHS/OASH)" <Jerome.Adams@hhs.gov>, "Fantinato, Jessica - OHS, Washington, DC" <jessica.fantinato@usda.gov>, "Colby, Michelle - OHS, Washington, DC" <michelle.colby@usda.gov>, <(b)(6)@usuhs.edu> <(b)(6)@usuhs.edu>, Danny Shiau <dshiau@cghe.org>

Subject: RE: Red Dawn Rising Start Feb 29

Sorry Duane, used the old string

Australia reports death of Diamond Princess cruise ship passenger (total deaths = 7; CFR 0.92%)
Israel reports another confirmed case in repatriated passenger (total cases now 754)

Thru Feb 29, 2020

Sent from Mail [go.microsoft.com] [gcc01.safelinks.protection.outlook.com] for Windows 10

Sent from Mail [go.microsoft.com] [gcc01.safelinks.protection.outlook.com] for Windows 10

From: Caneva, Duane

Sent: Saturday, February 29, 2020 10:21 PM

To: Dr. Eva K Lee; Tom Bossert; Dean, Charity A@CDPH; Carter Mecher; Lawler, James V; Tracey McNamara; Baric, Ralph S; Richard Hatchett; Martin, Gregory J; Walters, William; HAMILTON, CAMERON; <(b)(6)@gmail.com>; Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); David Marcozzi; Hepburn, Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; Callahan, Michael V.,M.D.; <(b)(6)@UTMB.EDU>; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Borio, Luciana; Hanfling, Dan; McDonald, Eric (San Diego County); Wade, David; TARANTINO, DAVID A; WILKINSON, THOMAS; david.gruber@dshs.texas.gov; KAUSHIK, SANGEETA; Lee, Scott; Padget, Larry G; Ryan Morhard; Stack, Steven J (CHFS DPH); Adams, Jerome (HHS/OASH); Fantinato, Jessica - OHS, Washington, DC; Colby, Michelle - OHS, Washington, DC; <(b)(6)@usuhs.edu>; Danny Shiau

Subject: Red Dawn Rising Start Feb 29

New Month, Fresh String.

Please Use this going forward for the Red Dawn email string.

Duane C. Caneva, MD, MS
Chief Medical Officer
Department of Homeland Security
202-254-6901 (o)
(b)(6) (c)
Duane.Caneva@hq.dhs.gov
DCaneva@dhs.ic.gov

Executive Assistant: Nichole Burton, (b)(6) @associates.hq.dhs.gov, 202-254-8284
(U) Warning: This document is UNCLASSIFIED//FOR OFFICIAL USE ONLY (U//FOUO). It contains information that may be exempt from public release under the Freedom of Information Act

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The information in this e-mail may be privileged and confidential, intended only for the use of the addressee(s) above. Any unauthorized use or disclosure of this information is prohibited. If you have received this e-mail by mistake, please delete it and immediately contact the sender.

Sender:	Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>
Recipient:	Lawler, James V <(b)(6)@unmc.edu>; Walters, William (STATE.GOV) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f3bd10f7e82440f282361d80de6b8c1f-William.Wal>; Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>
Sent Date:	2020/03/02 02:38:25
Delivered Date:	2020/03/02 02:38:59

From:	Marcozzi, David <(b)(6)@som.umaryland.edu>
To:	Carter Mecher <(b)(6)@charter.net>; Lawler, James V <(b)(6)@unmc.edu>; Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.roup (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Caneva, Duane (DHS.GOV) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b6ba3c00c7944e1b99ed3eecab996186-Duane.Canev>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>
CC:	Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject:	Re: VA Projections using Cruise Ship Data
Date:	2020/03/02 02:47:10
Priority:	Normal
Type:	Note

I don't get it. Why isn't it much help? We should see an uptick, no?

From: Carter Mecher <(b)(6)@charter.net>
Date: Sunday, March 1, 2020 at 10:07
To: James Lawler <(b)(6)@unmc.edu>, Robert Kadlec <Robert.Kadlec@hhs.gov>, Duane Caneva <(b)(6)@hq.dhs.gov>, <(b)(6)@mgh.harvard.edu>
 <(b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <Charity.Dean@cdph.ca.gov>
Cc: David Marcozzi <(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

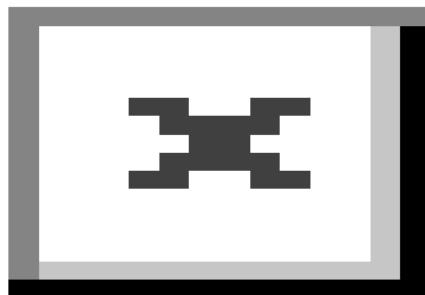
Was able to find South Korea flu surveillance.

<https://www.cdc.go.kr/board/board.es?mid=a30504000000&bid=0033>

I pulled the data for weeks 49-8 (it doesn't look like ILI is much help).

Week	ILI Rate	%Positive Samples for Influenza
49	19.5%	18.6%
50	28.5%	16.2%
51	37.8%	25.9%
52	49.8%	35.1%

1	49.1%	43.4%
2	47.8%	40.6%
3	42.4%	37.6%
4	40.9%	43.4%
5	28.0%	40.9%
6	16.4%	16.7%
7	11.6%	15.8%
8	8.5%	3.9%



Sent from [Mail](#) for Windows 10

From: [Lawler, James V](#)

Sent: Sunday, March 1, 2020 8:43 AM

To: [Kadlec, Robert \(OS/ASPR/IO\)](#); [Carter Mecher](#); [Caneva, Duane \(DHS.GOV\)](#); [Callahan, Michael V.,M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Tom Bossert](#)

Subject: Re: VA Projections using Cruise Ship Data

As Carter points out, Wuhan and other cities started way too late.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation

Global Center for Health Security, and
Associate Professor of Medicine
Division of Infectious Diseases
University of Nebraska Medical Center

m: (b)(6)

(b)(6)@unmc.edu

From: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>

Sent: Sunday, March 1, 2020 7:25:22 AM

To: Carter Mecher (b)(6)@charter.net>; Lawler, James V (b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV) (b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D.

(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>

Cc: Marcozzi, David (b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert

(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Here is something to ponder from the China CDC report from a couple of days ago.

“A main finding of this characterization and exploratory analysis of the first 72,314 cases of COVID-19 found in China in the 40 days between first recognition of the outbreak of pneumonia with unknown etiology on December 31, 2019 to the end of the study period on February 11, 2020 is that this novel coronavirus is highly contagious. It has spread extremely rapidly from a single city to the entire country within only about 30 days. Moreover, it has achieved such far-reaching effects even in the face of extreme response measures including the complete shutdown and isolation of whole cities, cancellation of Chinese New Year celebrations, prohibition of attendance at school and work, massive mobilization of health and public health personnel as well as military medical units, and rapid construction of entire hospitals.”

From: Carter Mecher (b)(6)@charter.net>

Sent: Sunday, March 1, 2020 7:58 AM

To: Lawler, James V (b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV)

(b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. (b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>

Cc: Marcozzi, David (b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert (b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

James said something to me that I do want to frame on the good wall (not the bad wall of understatement).

He gave a presentation to education leaders and I'm paraphrasing: With pandemic flu we would close the schools to protect the kids and reduce community transmission. With COVID we would close the schools (not so much to protect the kids), but to reduce community transmission and protect their grandparents.

James can phrase it better than I can—but that is the message. Tom are you listening?

Sent from Mail [protect2.fireeye.com] for Windows 10

From: Lawler, James V

Sent: Sunday, March 1, 2020 7:41 AM

To: Carter Mecher; Caneva, Duane; Callahan, Michael V., M.D.; Dean, Charity A@CDPH

Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

Listening to CNN "experts" this morning. They have no clue what they are talking about – saying that young people really shouldn't worry and older/vulnerable folks are the only ones that should be changing behavior. No concept that our elders are depending on the actions of the entire community and also that once the healthcare system collapses, all of the services for which younger folks access that system will be gone as well. We have to get out in front of messaging.

James Lawler, MD, MPH, FIDSA

m. (b)(6)

(b)(6)@unmc.edu

From: Carter Mecher (b)(6)@charter.net>

Date: Sunday, March 1, 2020 at 6:20 AM

To: "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Lawler, James V"

<(b)(6)@unmc.edu>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <charity.dean@cdph.ca.gov>

Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Richard Hatchett

<richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)"

<matthew.j.hepburn.civ@mail.mil>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>,

Tom Bossert <(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

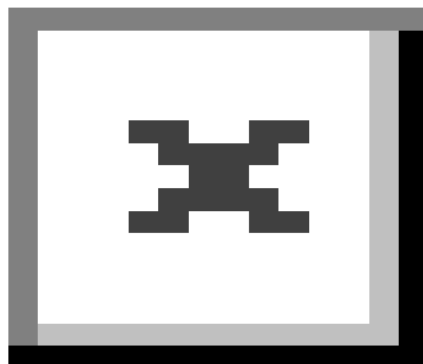
Non-UNMC email

Also have been thinking more about thresholds for pulling triggers.

I thought a but more about what James said about true prevalence—that it would be at least twice as high as we currently think it is on the cruise ship. That would mean that true attack rate is closer to 40%, 80% of cases are asymptomatic, 6% of cases are hospitalized, 1% are critical (in ICU), and CFR is about 0.5%. But given the demographics of the cruise ship we are really the diluting effect of kids and young adults. They would be expected to have high attack rates and even higher rates of asymptomatic disease and mild disease (pushing up the % asymptomatics, reducing the overall hospitalization rate, ICU rate and CFR). So wanted to play with those estimates of thresholds again (will resend updated math).

Yesterday I was at my daughter's house helping them pull out vines that were planted as ground cover. The damn things grow everywhere, climbing up trees and smothering them (this isn't kudzu). My wife said something about these vines that made me think of what we are seeing in South Korea, Italy and now the US. When you plant these vines, they go thru 3 stages—sleep, creep, and leap. First year they don't seem to be doing much—they sleep (but they are laying down a root system that you cannot see). The next year they creep (seeing some spread above ground while the root system hidden from view continues to spread). And the next year they leap (the vines seem to explode everywhere you look).

That is exactly what Italy feels like (but speeded up). We are blind to what is “happening underground.” The root system is really those dendrite transmission trees that Richard likes. I pulled out the Singapore graphic again of their contact tracing of cases (that is the root system). They have given up continuing to update that graphic and only providing linkages between cases when they provide brief summaries of individual cases. Probably getting to complex to show.



cid:image001.png@01D5EF91.940CA250

In the US we just pulled up three random roots that are far from any plants we can see above the surface. My concern is that we are at the cusp of “leap” and cases are going to start popping like popcorn wherever we look.

This gets to the timing of NPIs

I went back to the Philadelphia-St Louis comparison of 1918. The difference between Philadelphia and St. Louis in 1918 in terms when they pulled the trigger on NPIs was about two weeks during the course of their individual outbreaks. In St. Louis, NPIs were put in place 1 week after the first cases at Jefferson Barracks, 5 days after the first death, and 3 days after the first civilian cases in St. Louis. In Philadelphia, NPIs were put in place 3 weeks after the first cases at the Navy Yard, 16 days after the first civilian cases in Philadelphia, 2 weeks after the first death.

We would estimate that the outbreak in Wuhan had about a 2 week head start on the rest of Hubei. So the measures China implemented to slow transmission happened about two later in the course of the outbreak in Wuhan compared to the rest of Hubei Province. A comparison of hospitalization rate looks a lot like Philadelphia and St. Louis.

Hong Kong confirmed its first case of a traveler from Wuhan on Jan 23 (symptom onset of Jan 18). They would later learn of their first case of local transmission with symptom onset on Jan 22. On Jan 25, within 1 week of the symptom onset of the first case of a traveler and within 3 days of symptom onset of the first local case, they were already taking actions like suspending the reopening of schools—they were a bit lucky because the schools were closed for the Chinese New Year. So they took aggressive actions within 1 week of first recognized case. There was a lot of activity in Hong Kong in the first 3 weeks of January (large number of suspected cases that they were monitoring but they were only had syndromic surveillance since there were no diagnostics early on. So Hong Kong had been busy isolating scores of patients during the first 3 weeks of January based only on clinical presentation.

Singapore confirmed its first case on January 23 (traveler from Wuhan). The individual had symptom onset on Jan 20 on a flight to Singapore. On Feb 3, Singapore confirmed its first case of local transmission. Symptom onset for that individual was on Jan 29. On Feb 7, Singapore identified additional cases of local transmission and declared Code Orange and intensifies response. So Singapore takes aggressive action two weeks after confirmation of 1st case in a traveler and within 4 days of first case of local transmission.

Sent from [Mail \[go.microsoft.com\] \[protect2.fireeye.com\]](mailto:Mail[go.microsoft.com][protect2.fireeye.com]) for Windows 10

From: Carter Mecher

Sent: Sunday, March 1, 2020 5:58 AM

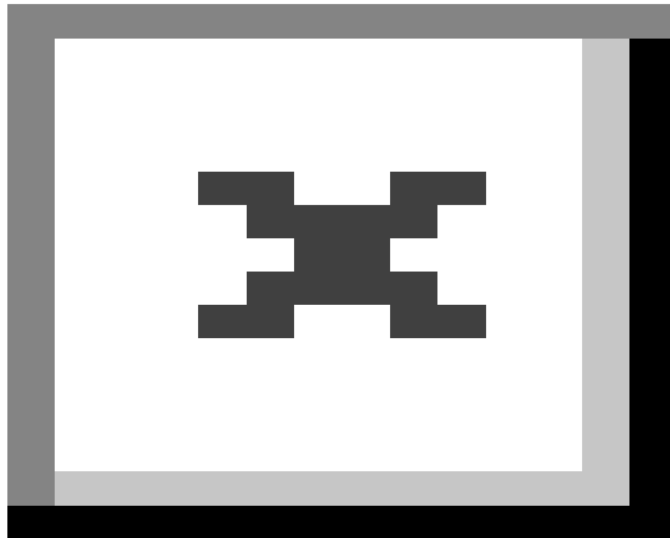
To: Caneva, Duane; Lawler, James V; Callahan, Michael V., M.D.; Dean, Charity A@CDPH

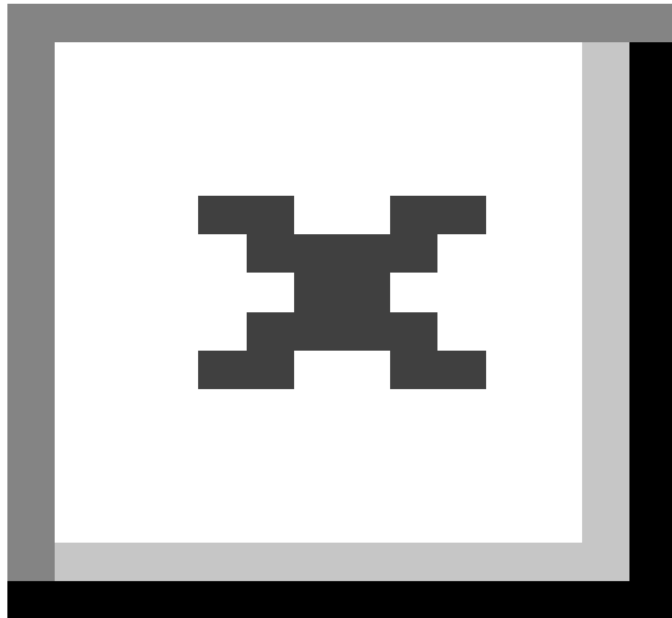
Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: RE: VA Projections using Cruise Ship Data

A few things for the group. Have been interested in whether we can see anything happening with flu surveillance (especially ILI) in places with COVID outbreaks, Am interested in looking at Japan, Hong Kong, Singapore, and Italy. So far, only found Hong Kong (Eva Lee found it). I will keep looking—really interested in South Korea and Italy to get a better sense of whether looking st ILI will be of any value.

https://www.chp.gov.hk/files/pdf/fluexpress_week8_27_2_2020_eng.pdf [chp.gov.hk]
[\[protect2.fireeye.com\]](https://protect2.fireeye.com) This is data thru Feb 22 (week 8). Hong Kong is really do a good job of surveillance. And what they are doing in terms of NPIs seems to be working (just like Singapore).





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From: [Caneva, Duane](#)

Sent: Saturday, February 29, 2020 11:18 PM

To: [Lawler, James V](#); [Carter Mecher](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: Re: VA Projections using Cruise Ship Data

+ Charity

CA seems first up.

Get Outlook for iOS [aka.ms] [protect2.fireeye.com]

From: Lawler, James V <(b)(6)@unmc.edu>
Sent: Saturday, February 29, 2020 11:06:20 PM
To: Carter Mecher <(b)(6)@charter.net>; Callahan, Michael V., M.D.
<(b)(6)@mgh.harvard.edu>
Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

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Math looks good, Carter. And your calculations are enlightening. I had thought that hospital and ICU surveillance would be too late, but if you can do 100% surveillance on SARI in ICUs, then you might be able to act in time. Assume ICU is 1/5th of severe cases requiring hospitalization, then you are looking at roughly 12 cases per million. Let's assume 50% ascertainment rate for ICU, so when you detect 5-6 ICU COVID per million, you have hit your trigger. This assumes homogeneous distribution in communities, which is probably not true. So we may need to focus on certain segments (people from Chinatown in NY who are expected to have closer links to travelers from outbreak areas early) and have lower trigger – first 1-2 cases.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>
Date: Saturday, February 29, 2020 at 6:53 PM
To: "Lawler, James V" <(b)(6)@unmc.edu>, "Callahan, m." <(b)(6)@mgh.harvard.edu>
Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Something I have been thinking about wrt thresholds for NPIs. We usually think of the window for implementing NPIs as before 1% prevalence. But this disease has more than 50% asymptomatics, so the threshold is really 0.5% prevalence of any symptoms (including very mild symptoms). But CDC criteria for testing is severe disease. Let's say that 5% of those who are infected have severe disease, that means our threshold is 1%*5% = 0.05%. But it takes 2 weeks or so before a patient who is infected

becomes seriously ill. Over the span of 2 weeks plus the lag time for testing, the outbreak could have had at least 3 doublings (so an 8-fold increase). That may be conservative. So we are really talking about a threshold of close to $0.05\%/8 = 0.00625\%$. For a city of 1 M, that is 62 serious cases, 625 symptomatic, 1,250 infected. In 2 weeks, these numbers could be 500 serious, 5,000 symptomatic, 10,000 infected (the 1% threshold). Once you are there, the window is closed. If we assume a 3 week lag from infection onset to death, the number of deaths would be based on a denominator of 3 weeks ago, so divide 1,250 infected by roughly 3 (assume cases triple in a week), to get 400. Assume a CFR of 0.8%, so about 3 deaths. More than 3 deaths per million population is probably too late. Somebody could check my math.

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From: Lawler, James V

Sent: Saturday, February 29, 2020 5:31 PM

To: Callahan, Michael V., M.D.

Cc: Marcozzi, David; Carter Mecher; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Caneva, Duane; Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

Agree. We have set our d/c criteria for persons in isolation (documented infection) at improved sx's, afebrile x48 hrs (off antipyretics) and swab neg X3 24 hrs apart.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Callahan, m." <(b)(6)@mgh.harvard.edu>

Date: Saturday, February 29, 2020 at 2:39 PM

To: "Lawler, James V" <(b)(6)@unmc.edu>

Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Carter Mecher

<(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane"

<(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert <(b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Not great.....Better than poorly performed Induced sputum for AFB !

James, results from a 3rd Deep nasal swab could help us establish a viable protocol my 2 cents.

Michael Callahan MD MSPH DTM&H, DMCC (UK)

Director, Mass-Casualty Infection Operations

Vaccine & Immunotherapy Center

Massachusetts General Hospital

Boston, MA

Special Advisor to the Assistant Secretary of Public Health Preparedness and Response
U.S Dept of Health and Human Services
O'Neil Building 6th Floor
Washington, DC

On Feb 29, 2020, at 05:35, Lawler, James V <(b)(6)>@unmc.edu> wrote:

External Email - Use Caution

NP x2 = 75% sensitivity, if my probability skilz are correct.

James Lawler, MD, MPH, FIDSA

m:(b)(6)
(b)(6)>@unmc.edu

From: "Marcozzi, David" <(b)(6)>@som.umaryland.edu>
Date: Saturday, February 29, 2020 at 5:11 AM
To: "Lawler, James V" <(b)(6)>@unmc.edu>, Carter Mecher <(b)(6)>@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" <(b)(6)>@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, "Callahan, m." <(b)(6)>@mgh.harvard.edu>, Tom Bossert <(b)(6)>@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Wow, NP still misses 50%?

Can we assume this increase in magnitude (x2-3) for anyplace doing testing with NP? How much more sensitive with NP x2? That is what we do at Maryland.

Respectfully,

David Marcozzi, MD, MHS-CL, FACEP
Associate Professor
Associate Chair of Population Health
Department of Emergency Medicine
University of Maryland School of Medicine
[https://protect2.fireeye.com/url?k=6aa52cca-36f135b6-6aa51df5-0cc47adc5fa2-e0959642154a5a0a&u=https://em.umaryland.edu/\[em.umaryland.edu\]\[protect2.fireeye.com\]](https://protect2.fireeye.com/url?k=6aa52cca-36f135b6-6aa51df5-0cc47adc5fa2-e0959642154a5a0a&u=https://em.umaryland.edu/[em.umaryland.edu][protect2.fireeye.com])

Associate Professor
Department of Epidemiology and Public Health

University of Maryland School of Medicine
<https://protect2.fireeye.com/url?k=444fe884-181bf1f8-444fd9bb-0cc47adc5fa2-47e8e17f65232e1b&u=https://www.medschool.umaryland.edu/epidemiology/> [medschool.umaryland.edu]
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Assistant Chief Medical Officer for Acute Care
University of Maryland Medical Center
<https://protect2.fireeye.com/url?k=2b8a4d85-77de54f9-2b8a7cba-0cc47adc5fa2-9309107e44106515&u=http://www.umm.edu/> [umm.edu] [protect2.fireeye.com]

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[fire.baltimorecity.gov] [protect2.fireeye.com]

Mailing Address:
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110 South Paca Street
Baltimore, Maryland 21201
(667)-214-2208 (office)

(b)(6) @som.umaryland.edu

Take time to deliberate; but when the time for action arrives, stop thinking and go in.
President Andrew Jackson

From: James Lawler <(b)(6)@unmc.edu>
Date: Friday, February 28, 2020 at 19:57
To: Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, David Marcozzi <(b)(6)@som.umaryland.edu>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Duane Caneva <(b)(6)@hq.dhs.gov>, Robert Kadlec <Robert.Kadlec@hhs.gov>, (b)(6)@mgh.harvard.edu, (b)(6)@mgh.harvard.edu, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Interestingly Japanese health folks only did OP swabs x1. NP swabs are much more sensitive. OP for us about half as sensitive (or less). NP already misses 50% with a single swab. So would probably multiply Japanese swab + by 2-3 to get true infection rate.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation
Global Center for Health Security, and
Associate Professor of Medicine

Division of Infectious Diseases
University of Nebraska Medical Center
m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>
Sent: Friday, February 28, 2020 3:06:10 PM
To: Richard Hatchett <richard.hatchett@cepi.net>; Lawler, James V <(b)(6)@unmc.edu>;
Marcozzi, David <(b)(6)@som.umaryland.edu>; Hepburn, Matthew J CIV USARMY (USA)
<matthew.j.hepburn.civ@mail.mil>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Kadlec, Robert
(OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Callahan, Michael V., M.D.
<(b)(6)@mgh.harvard.edu>; Tom Bossert <(b)(6)@me.com>
Subject: VA Projections using Cruise Ship Data

Non-UNMC email

I wanted to bounce this around the smaller group of wolverines. I also pulled the numbers of deaths annually in veterans and estimated deaths for all 19 M veterans using age specific death rates for males. The interesting thing is that the numbers of projected deaths related to COVID are actually pretty small compared to what we normally see for veterans. The challenge will be the amount of acute care—especially ICU care. The only chance that VA has is that we can knock down the attack rate thru TLC. The demand for acute care is overwhelming. The system would collapse under that level of demand.

Estimates of the impact of COVID on VA

In FY2019, VA cared for 6,271,019 unique veterans and had 9,237,638 veteran enrollees.

The Diamond Princess cruise ship outbreak can provide invaluable insights into the potential impact to VA.

Below is a comparison of the US population, the adult population aboard the cruise ship, and the Veteran population.

AGE	US Population 2017	% Distribution	Cruise Ship Passengers & Crew	% Distribution	FY2019 Veterans Vet Pop	% Distribution
20-29 years	45,489,095	19%	347	9%	932,473	5%
30-39 years	43,204,209	18%	428	12%	1,989,045	10%
40-49 years	40,617,231	17%	334	9%	2,194,505	11%
50-59 years	43,409,050	18%	398	11%	3,169,787	17%
60-69 years	36,824,083	15%	923	25%	3,735,399	19%
70-79 years	21,588,326	9%	1,015	27%	4,405,551	23%

>80 years	12,433,972	5%	227	6%	2,782,943	14%
Total population	243,565,966	100%	3,672	100%	19,209,704	100%

The Veteran population is similar to the Diamond Princess cruise ship population. If anything, the veteran population is even older (so at even higher risk). There were 3,711 passengers and crew aboard the crew ship (1,045 crew and 2,666 passengers). As of February 28, 2020, there have been 751 confirmed cases of COVID (attack rate of 20%). There have been 6 deaths thus far (lower limit of a case fatality rate of 0.80%). [A timeline of the outbreak is provided at the bottom of this message.] 380 of the confirmed cases were asymptomatic (50.6%). It is estimated that approximately 12-15% of the 751 passengers and crew with confirmed disease required acute care with 36 hospitalized patients reported to be in serious condition (5%). We looked at a range of ICU admissions (2%-5% of those who become infected).

Given the similarities of the demographics of the cruise ship and veterans, we could project the potential impact on veterans.

Veterans	Population FY2019	Total Infected (20% AR)	Number Asymptomatic (50.6%)	Hospitalizations 12%	ICU Admissions 2%	ICU Admissions 5%	Deaths CFR 0.80%
All Veterans	19,209,704	3,841,941	1,944,022	461,033	76,839	192,097	30,736
Veteran Enrollees	9,237,638	1,847,528	934,849	221,703	36,951	92,376	14,780
Veteran Uniques	6,271,019	1,254,204	634,627	150,504	25,084	62,710	10,034

Need to place these numbers into perspective.

Acute Inpatient Care	VHA Total
Operating Beds Hospital	15,744
Operating Beds Medicine/Surgery	9,817
Operating Beds ICU	1,692
ADC Hospital	9,805
ADC Medicine/Surgery	6,225
ADC ICU	1,101
ADC On a Ventilator	240

Daily Hospital Admissions	1,641
Daily Admissions Medicine/Surgery	1,226
Daily Admissions/Transfers in ICU	389
Emergency Department Care	
Daily ER Visits	6,874
Outpatient Care (non-ER)	
Daily Clinic Visits	209,336

The estimated number of deaths for all 19 M veterans is ~556,000. The number of annual deaths of veteran enrollees in FY2019 was 350,737. The projected number of COVID deaths for veterans is 14,780

The number of veterans who had an acute care hospitalization in FY2019 and died at any time during FY2019 was 62,375. The number of COVID deaths projected in veteran uniques (users) is 10,034.

Annually, VA has:

- 600,000 acute (medical/surgical) admissions
- 140,000 ICU admissions
- 2.5M ER/Urgent Care visits

If we assume that this outbreak will last approximately 3 months, we can then overlay the projected demand upon the usual background utilization over 3 months.

Even if we simply focus on the veteran uniques (veterans who used VA services and not enrollees), the numbers are a little overwhelming. We assumed that there might be 3 ER visits for each admission--so roughly 450,000 ER visits, 150,000 hospitalizations, and 25,000-63,000 ICU admissions.

Over an average 3-month period, VA would have ~625,000 ER/Urgent care visits, 150,000 acute care admissions, and 35,000 ICU admissions.

We assumed that acutely ill COVID patients will have long lengths of stay (14-21 days). If VA needs to absorb 150,000 hospitalizations (each with a LOS of 14-21 days), it would require 2.1 M to 3.2 M BDOCs.

If we assumed 14 day LOS for each ICU admission, 25,000-63,000 ICU admissions would equate to 350,000-882,000 ICU BDOCs.

The VA has 15,744 hospital operational beds (runs an ADC of only 9,805). Even if VA mobilized all those potential beds (15,744), for 3 months (90 days), we would generate the capacity for 1.4 M BDOCs.

Demand for care would exceed capacity by 700K BDOCs for a 14 day LOS and 1.7M BDOCs for a LOS of 21 days (1.5-2.2 times maximum capacity).

The VA has 1,692 ICU beds (runs an ADC of 1,101). Mobilizing all 1,692 ICU beds for 3 months (90 days), we would generate 152,000 BDOCs. Demand for ICU care would exceed capacity by 200,000-730,000 ICU BDOCs (2-5 times existing capacity).

This demand for care would not be constant across the 3 month period. The demand would rise exponentially, plateau, and then fall. The real concern is what will happen during the peak period of the epidemic.

VA does not have enough capacity to meet this demand, even if it mobilized every potential hospital bed to care for COVID patients (and there would be no capacity to care for usual demand for non-COVID acute care). And all this will be happening with a VA workforce that will be significantly diminished due to illness, home isolation, home quarantine and childminding responsibilities related to closure of schools and daycare, and fear.

Timeline of Diamond Princess cruise ship outbreak

Date	Event	Cumulative Number of Confirmed Cases	Cumulative Number of Deaths	Note
20-Jan	Cruise ship departs from Yokohama Japan			
25-Jan	80 year old passenger disembarks in Hong Kong			
1-Feb	80 year old passenger confirmed to have COVID-19			
	When results known, certificate of landing canceled and ship under quarantine. Tests for the virus would be administered to three groups: those with symptoms, those who got off in Hong Kong, and those who had close contact with the infected passenger.			
3-Feb	Ship arrives in port of Yokohama Japan			
5-Feb	10 passengers and crew confirmed +	10		
6-Feb	31 more passengers and crew confirmed +	41		
7-Feb	30 more passenger and crew confirmed +	61		
8-Feb	9 more passenger and crew confirmed +	70		
10-Feb	66 more passenger and crew confirmed +	136		439 tes

11-Feb	39 more passenger and crew confirmed +	175		492 tes
12-Feb	28 more passenger and crew confirmed +	203		4 in IC
13-Feb	15 more passenger and crew confirmed +	218		713 tes
14-Feb	67 more passenger and crew confirmed +	285		927 tes
15-Feb	70 more passenger and crew confirmed +	355		1,211 tested; asymptom
16-Feb	329 American evacuated from cruise ship (14 of the evacuees found to be +) 61 Americans remained on board 44 Americans remained hospitalized in Japan	369		
17-Feb	85 more passenger and crew confirmed +	454		1,721 tested; serious
18-Feb	167 more passenger and crew confirmed +	621		3,011 te
19-Feb	2 deaths	621	2	
20-Feb	13 more passenger and crew confirmed +	634	2	3,061 tested; seriously ill asymptom
23-Feb	Death reported in Japan		3	
24-Feb	Japan updates total to 691; US reports 36 in US	691	3	
25-Feb	Death reported in Japan; US reports 40 in US; UK 4; Australia 7; Hong Kong 4; Israel 2; Total 744; plus 4 not on ship	734	4	3,891 tested; seriously ill asymptom
26-Feb	US reports total of 42 cases in US; Japan announces that 45 of 813 former passengers have symptoms and will need to be tested; 14 new cases confirmed in the Diamond Princess cruise ship, raising the total to 705 cases inside the ship	750	4	

27-Feb	Australia (+1) 8 cases (repatriated)	751	4	
28-Feb	2 death reported in Japan	751	6	

As a check on deaths, I applied the age specific death rates per 100,000 population for the entire veteran population of 19M (90% male)

AGE	2019 VetPop	2017 Male All Cause Mortality per 100,000	Estimated 2017 All Cause Deaths
20 to 24 years	262,415	137.9	362
25 to 29 years	670,058	171.3	1,148
30 to 34 years	933,598	196.3	1,833
35 to 39 years	1,055,447	227.1	2,397
40 to 44 years	1,004,755	273.6	2,749
45 to 49 years	1,189,750	387.3	4,608
50 to 54 years	1,457,440	604.4	8,809
55 to 59 years	1,712,347	919.5	15,745
60 to 64 years	1,867,136	1,328.3	24,801
65 to 69 years	1,868,263	1,831.8	34,223
70 to 74 years	2,703,684	2,668.0	72,134
75 to 79 years	1,701,867	4,193.7	71,371
80 to 84 years	1,187,331	6,901.6	81,945
85 years and over	1,595,611	14,689.2	234,383
Total population	19,209,704	863.8	556,507

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The information in this e-mail may be privileged and confidential, intended only for the use of the addressee(s) above. Any unauthorized use or disclosure of this information is prohibited. If you have received this e-mail by mistake, please delete it and immediately contact the sender.

Sender:	Marcozzi, David (b)(6)@som.umaryland.edu>
Recipient:	Carter Mecher (b)(6)@charter.net>; Lawler, James V (b)(6)@unmc.edu>; Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Caneva, Duane (DHS.GOV) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b6ba3c00c7944e1b99ed3eecab996186-Duane.Canev>; Callahan, Michael V., M.D. (b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert (b)(6)@me.com>
Sent Date:	2020/03/02 02:46:54
Delivered Date:	2020/03/02 02:47:10

From:	Carter Mecher <(b)(6)@charter.net>
To:	Marcozzi, David <(b)(6)@som.umaryland.edu>; Lawler, James V <(b)(6)@unmc.edu>; Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.roup (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Caneva, Duane (DHS.GOV) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b6ba3c00c7944e1b99ed3eecab996186-Duane.Canev>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>
CC:	Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert <(b)(6)@me.com>
Subject:	RE: VA Projections using Cruise Ship Data
Date:	2020/03/02 05:39:41
Priority:	Normal
Type:	Note

I thought it would. But this data is for the week ending Feb 22. On Feb 22 South Korea had 346 cases/2 deaths. Today they are up to 4,335 case/26 deaths. So maybe too quick to judge.

Sent from Mail for Windows 10

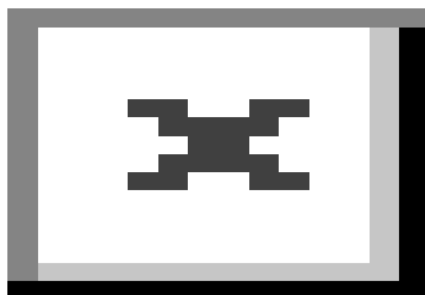
From: Marcozzi, David
Sent: Monday, March 2, 2020 2:47 AM
To: Carter Mecher; Lawler, James V; Kadlec, Robert (OS/ASPR/IO); Caneva, Duane (DHS.GOV); Callahan, Michael V., M.D.; Dean, Charity A@CDPH
Cc: Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Tom Bossert
Subject: Re: VA Projections using Cruise Ship Data

I don't get it. Why isn't it much help? We should see an uptick, no?

From: Carter Mecher <(b)(6)@charter.net>
Date: Sunday, March 1, 2020 at 10:07
To: James Lawler <(b)(6)@unmc.edu>, Robert Kadlec <Robert.Kadlec@hhs.gov>, Duane Caneva <(b)(6)@hq.dhs.gov>, <(b)(6)@mgh.harvard.edu>
<(b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <Charity.Dean@cdph.ca.gov>
Cc: David Marcozzi <(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Was able to find South Korea flu surveillance.
<https://www.cdc.go.kr/board/board.es?mid=a30504000000&bid=0033>
I pulled the data for weeks 49-8 (it doesn't look like ILI is much help).

Week	ILI Rate	%Positive Samples for Influenza
49	19.5%	18.6%
50	28.5%	16.2%
51	37.8%	25.9%
52	49.8%	35.1%
1	49.1%	43.4%
2	47.8%	40.6%
3	42.4%	37.6%
4	40.9%	43.4%
5	28.0%	40.9%
6	16.4%	16.7%
7	11.6%	15.8%
8	8.5%	3.9%



Sent from [Mail](#) for Windows 10

From: [Lawler, James V](#)

Sent: Sunday, March 1, 2020 8:43 AM

To: [Kadlec, Robert \(OS/ASPR/IO\)](#); [Carter Mecher](#); [Caneva, Duane \(DHS.GOV\)](#); [Callahan, Michael V.,M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Tom Bossert](#)

Subject: Re: VA Projections using Cruise Ship Data

As Carter points out, Wuhan and other cities started way too late.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation
Global Center for Health Security, and
Associate Professor of Medicine
Division of Infectious Diseases
University of Nebraska Medical Center
m: (b)(6)
(b)(6)@unmc.edu

From: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>
Sent: Sunday, March 1, 2020 7:25:22 AM
To: Carter Mecher (b)(6)@charter.net>; Lawler, James V (b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV) (b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. (b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>
Cc: Marcozzi, David (b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Tom Bossert (b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Here is something to ponder from the China CDC report from a couple of days ago.

“A main finding of this characterization and exploratory analysis of the first 72,314 cases of COVID-19 found in China in the 40 days between first recognition of the outbreak of pneumonia with unknown etiology on December 31, 2019 to the end of the study period on February 11, 2020 is that this novel coronavirus is highly contagious. It has spread extremely rapidly from a single city to the entire country within only about 30 days. Moreover, it has achieved such far-reaching effects even in the face of extreme response measures including the complete shutdown and isolation of whole cities, cancellation of Chinese New Year celebrations, prohibition of attendance at school and work, massive mobilization of health and public health personnel as well as military medical units, and rapid construction of entire hospitals.”

From: Carter Mecher (b)(6)@charter.net>
Sent: Sunday, March 1, 2020 7:58 AM
To: Lawler, James V (b)(6)@unmc.edu>; Caneva, Duane (DHS.GOV) (b)(6)@hq.dhs.gov>; Callahan, Michael V., M.D. (b)(6)@mgh.harvard.edu>; Dean, Charity A@CDPH <charity.dean@cdph.ca.gov>
Cc: Marcozzi, David (b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Kadlec, Robert

(OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert <tom.bossert@me.com>

Subject: RE: VA Projections using Cruise Ship Data

James said something to me that I do want to frame on the good wall (not the bad wall of understatements).

He gave a presentation to education leaders and I'm paraphrasing: With pandemic flu we would close the schools to protect the kids and reduce community transmission. With COVID we would close the schools (not so much to protect the kids), but to reduce community transmission and protect their grandparents.

James can phrase it better than I can—but that is the message. Tom are you listening?

Sent from [Mail \[protect2.fireeye.com\]](mailto:protect2.fireeye.com) for Windows 10

From: Lawler, James V

Sent: Sunday, March 1, 2020 7:41 AM

To: Carter Mecher; Caneva, Duane; Callahan, Michael V., M.D.; Dean, Charity A@CDPH

Cc: Marcozzi, David; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

Listening to CNN "experts" this morning. They have no clue what they are talking about – saying that young people really shouldn't worry and older/vulnerable folks are the only ones that should be changing behavior. No concept that our elders are depending on the actions of the entire community and also that once the healthcare system collapses, all of the services for which younger folks access that system will be gone as well. We have to get out in front of messaging.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>

Date: Sunday, March 1, 2020 at 6:20 AM

To: "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Lawler, James V"

<(b)(6)@unmc.edu>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, "Dean, Charity A@CDPH" <charity.dean@cdph.ca.gov>

Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Richard Hatchett

<richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)"

<matthew.j.hepburn.civ@mail.mil>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert <(b)(6)@me.com>

Subject: RE: VA Projections using Cruise Ship Data

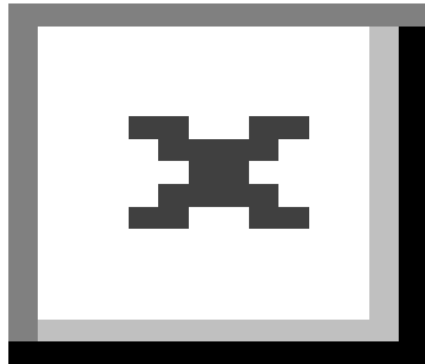
Non-UNMC email

Also have been thinking more about thresholds for pulling triggers.

I thought a but more about what James said about true prevalence—that it would be at lest twice as high as we currently think it is on the cruise ship. That would mean that true attack rate is closer to 40%, 80% of cases are asymptomatic, 6% of cases are hospitalized, 1% are critical (in ICU), and CFR is about 0.5%. But given the demographics of the cruise ship we are really the diluting effect of kids and young adults. They would be expected to have high attack rates and even higher rates of asymptomatic disease and mild disease (pushing up the % asymptomatics, reducing the overall hospitalization rate, ICU rate and CFR). So wanted to play with those estimates of thresholds again (will resend updated math).

Yesterday I was at my daughter's house helping them pull out vines that were planted as ground cover. The damn things grow everywhere, climbing up trees and smothering them (this isn't kudzu). My wife said something about these vines that made me think of what we are seeing in South Korea, Italy and now the US. When you plant these vines, they go thru 3 stages—sleep, creep, and leap. First year they don't seem to be doing much—they sleep (but they are laying down a root system that you cannot see). The next year they creep (seeing some spread above ground while the root system hidden from view continues to spread). And the next year they leap (the vines seem to explode everywhere you look).

That is exactly what Italy feels like (but speeded up). We are blind to what is “happening underground.” The root system is really those dendrite transmission trees that Richard likes. I pulled out the Singapore graphic again of their contact tracing of cases (that is the root system). They have given up continuing to update that graphic and only providing linkages between cases when they provide brief summaries of individual cases. Probably getting to complex to show.



In the US we just pulled up three random roots that are far from any plants we can see above the surface. My concern is that we are at the cusp of “leap” and cases are going to start popping like popcorn wherever we look.

This gets to the timing of NPIs

I went back to the Philadelphia-St Louis comparison of 1918. The difference between Philadelphia and St. Louis in 1918 in terms when they pulled the trigger on NPIs was about two weeks during the course of their individual outbreaks. In St. Louis, NPIs were put in place 1 week after the first cases at Jefferson Barracks, 5 days after the first death, and 3 days after the first civilian cases in St. Louis. In Philadelphia, NPIs were put in place 3 weeks after the first cases at the Navy Yard, 16 days after the first civilian cases in Philadelphia, 2 weeks after the first death.

We would estimate that the outbreak in Wuhan had about a 2 week head start on the rest of Hubei. So the measures China implemented to slow transmission happened about two later in the course of the outbreak in Wuhan compared to the rest of Hubei Province. A comparison of hospitalization rate looks a lot like Philadelphia and St. Louis.

Hong Kong confirmed its first case of a traveler from Wuhan on Jan 23 (symptom onset of Jan 18). They would later learn of their first case of local transmission with symptom onset on Jan 22. On Jan 25, within 1 week of the symptom onset of the first case of a traveler and within 3 days of symptom onset of the first local case, they were already taking actions like suspending the reopening of schools—they were a bit lucky because the schools were closed for the Chinese New Year. So they took aggressive actions within 1 week of first recognized case. There was a lot of activity in Hong Kong in the first 3 weeks of January (large number of suspected cases that they were monitoring but they were only had syndromic surveillance since there were no diagnostics early on. So Hong Kong had been busy isolating scores of patients during the first 3 weeks of January based only on clinical presentation.

Singapore confirmed its first case on January 23 (traveler from Wuhan). The individual had symptom onset on Jan 20 on a flight to Singapore. On Feb 3, Singapore confirmed its first case of local transmission. Symptom onset for that individual was on Jan 29. On Feb 7, Singapore identified additional cases of local transmission and declared Code Orange and intensifies response. So Singapore takes aggressive action two weeks after confirmation of 1st case in a traveler and within 4 days of first case of local transmission.

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From: [Carter Mecher](#)

Sent: Sunday, March 1, 2020 5:58 AM

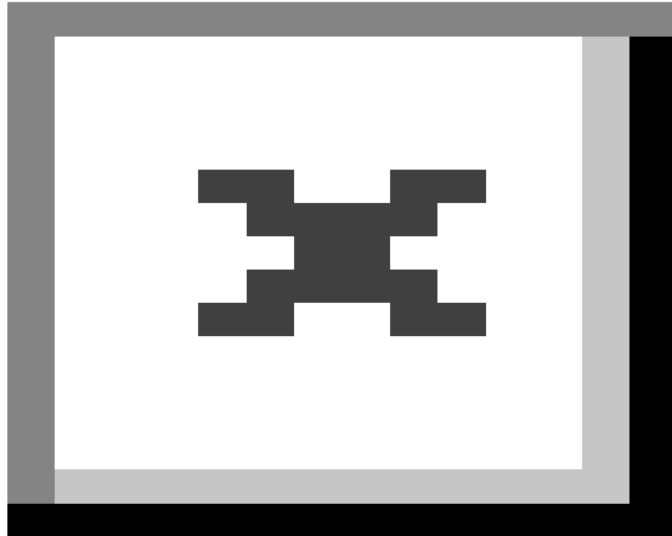
To: [Caneva, Duane](#); [Lawler, James V](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

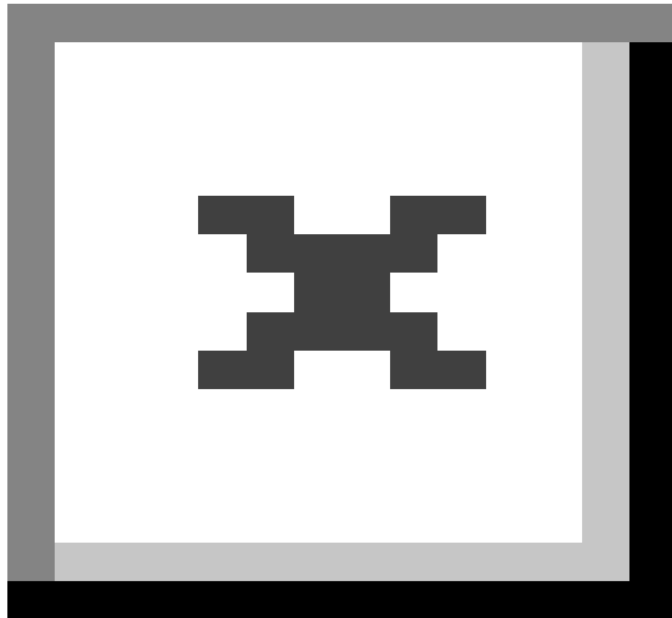
Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: RE: VA Projections using Cruise Ship Data

A few things for the group. Have been interested in whether we can see anything happening with flu surveillance (especially ILI) in places with COVID outbreaks, Am interested in looking at Japan, Hong Kong, Singapore, and Italy. So far, only found Hong Kong (Eva Lee found it). I will keep looking—really interested in South Korea and Italy to get a better sense of whether looking st ILI will be of any value.

https://www.chp.gov.hk/files/pdf/fluexpress_week8_27_2_2020_eng.pdf [chp.gov.hk]
[\[protect2.fireeye.com\]](https://protect2.fireeye.com) This is data thru Feb 22 (week 8). Hong Kong is really do a good job of surveillance. And what they are doing in terms of NPIs seems to be working (just like Singapore).





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From: [Caneva, Duane](#)

Sent: Saturday, February 29, 2020 11:18 PM

To: [Lawler, James V](#); [Carter Mecher](#); [Callahan, Michael V., M.D.](#); [Dean, Charity A@CDPH](#)

Cc: [Marcozzi, David](#); [Richard Hatchett](#); [Hepburn, Matthew J CIV USARMY \(USA\)](#); [Kadlec, Robert \(OS/ASPR/IO\)](#); [Tom Bossert](#)

Subject: Re: VA Projections using Cruise Ship Data

+ Charity

CA seems first up.

Get Outlook for iOS [aka.ms] [protect2.fireeye.com]

From: Lawler, James V <(b)(6)@unmc.edu>
Sent: Saturday, February 29, 2020 11:06:20 PM
To: Carter Mecher <(b)(6)@charter.net>; Callahan, Michael V., M.D.
<(b)(6)@mgh.harvard.edu>
Cc: Marcozzi, David <(b)(6)@som.umaryland.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

Math looks good, Carter. And your calculations are enlightening. I had thought that hospital and ICU surveillance would be too late, but if you can do 100% surveillance on SARI in ICUs, then you might be able to act in time. Assume ICU is 1/5th of severe cases requiring hospitalization, then you are looking at roughly 12 cases per million. Let's assume 50% ascertainment rate for ICU, so when you detect 5-6 ICU COVID per million, you have hit your trigger. This assumes homogeneous distribution in communities, which is probably not true. So we may need to focus on certain segments (people from Chinatown in NY who are expected to have closer links to travelers from outbreak areas early) and have lower trigger – first 1-2 cases.

James Lawler, MD, MPH, FIDSA

m: (b)(6)
(b)(6)@unmc.edu

From: Carter Mecher <(b)(6)@charter.net>
Date: Saturday, February 29, 2020 at 6:53 PM
To: "Lawler, James V" <(b)(6)@unmc.edu>, "Callahan, m." <(b)(6)@mgh.harvard.edu>
Cc: "Marcozzi, David" <(b)(6)@som.umaryland.edu>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert <(b)(6)@me.com>
Subject: RE: VA Projections using Cruise Ship Data

Non-UNMC email

Something I have been thinking about wrt thresholds for NPIs. We usually think of the window for implementing NPIs as before 1% prevalence. But this disease has more than 50% asymptomatics, so the threshold is really 0.5% prevalence of any symptoms (including very mild symptoms). But CDC criteria for testing is severe disease. Let's say that 5% of those who are infected have severe disease, that means our threshold is 1%*5% = 0.05%. But it takes 2 weeks or so before a patient who is infected

becomes seriously ill. Over the span of 2 weeks plus the lag time for testing, the outbreak could have had at least 3 doublings (so an 8-fold increase). That may be conservative. So we are really talking about a threshold of close to $0.05\%/8 = 0.00625\%$. For a city of 1 M, that is 62 serious cases, 625 symptomatic, 1,250 infected. In 2 weeks, these numbers could be 500 serious, 5,000 symptomatic, 10,000 infected (the 1% threshold). Once you are there, the window is closed. If we assume a 3 week lag from infection onset to death, the number of deaths would be based on a denominator of 3 weeks ago, so divide 1,250 infected by roughly 3 (assume cases triple in a week), to get 400. Assume a CFR of 0.8%, so about 3 deaths. More than 3 deaths per million population is probably too late. Somebody could check my math.

Sent from Mail [go.microsoft.com] [protect2.fireeye.com] for Windows 10

From: Lawler, James V

Sent: Saturday, February 29, 2020 5:31 PM

To: Callahan, Michael V., M.D.

Cc: Marcozzi, David; Carter Mecher; Richard Hatchett; Hepburn, Matthew J CIV USARMY (USA); Caneva, Duane; Kadlec, Robert (OS/ASPR/IO); Tom Bossert

Subject: Re: VA Projections using Cruise Ship Data

Agree. We have set our d/c criteria for persons in isolation (documented infection) at improved sx's, afebrile x48 hrs (off antipyretics) and swab neg X3 24 hrs apart.

James Lawler, MD, MPH, FIDSA

m: (b)(6)

(b)(6)@unmc.edu

From: "Callahan, m." (b)(6)@mgh.harvard.edu>

Date: Saturday, February 29, 2020 at 2:39 PM

To: "Lawler, James V" (b)(6)@unmc.edu>

Cc: "Marcozzi, David" (b)(6)@som.umaryland.edu>, Carter Mecher

(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane"

(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, Tom Bossert (b)(6)@me.com>

Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Not great.....Better than poorly performed Induced sputum for AFB !

James, results from a 3rd Deep nasal swab could help us establish a viable protocol my 2 cents.

Michael Callahan MD MSPH DTM&H, DMCC (UK)

Director, Mass-Casualty Infection Operations

Vaccine & Immunotherapy Center

Massachusetts General Hospital

Boston, MA

Special Advisor to the Assistant Secretary of Public Health Preparedness and Response
U.S Dept of Health and Human Services
O'Neil Building 6th Floor
Washington, DC

On Feb 29, 2020, at 05:35, Lawler, James V <(b)(6)@unmc.edu> wrote:

External Email - Use Caution

NP x2 = 75% sensitivity, if my probability skilz are correct.

James Lawler, MD, MPH, FIDSA

m (b)(6)
(b)(6)@unmc.edu

From: "Marcozzi, David" <(b)(6)@som.umaryland.edu>
Date: Saturday, February 29, 2020 at 5:11 AM
To: "Lawler, James V" <(b)(6)@unmc.edu>, Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, "Hepburn, Matthew J CIV USARMY (USA)" <matthew.j.hepburn.civ@mail.mil>, "Caneva, Duane" <(b)(6)@hq.dhs.gov>, "Kadlec, Robert (OS/ASPR/IO)" <Robert.Kadlec@hhs.gov>, "Callahan, m." <(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Non-UNMC email

Wow, NP still misses 50%?

Can we assume this increase in magnitude (x2-3) for anyplace doing testing with NP? How much more sensitive with NP x2? That is what we do at Maryland.

Respectfully,

David Marcozzi, MD, MHS-CL, FACEP
Associate Professor
Associate Chair of Population Health
Department of Emergency Medicine
University of Maryland School of Medicine
[https://protect2.fireeye.com/url?k=c0684fcd-9c3d46de-c0687ef2-0cc47adb5650-aa7d50d13d1b6c8d&u=https://em.umaryland.edu/\[em.umaryland.edu\]\[protect2.fireeye.com\]](https://protect2.fireeye.com/url?k=c0684fcd-9c3d46de-c0687ef2-0cc47adb5650-aa7d50d13d1b6c8d&u=https://em.umaryland.edu/[em.umaryland.edu][protect2.fireeye.com])

Associate Professor
Department of Epidemiology and Public Health

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(b)(6) @som.umaryland.edu

Take time to deliberate; but when the time for action arrives, stop thinking and go in.
President Andrew Jackson

From: James Lawler <(b)(6)@unmc.edu>
Date: Friday, February 28, 2020 at 19:57
To: Carter Mecher <(b)(6)@charter.net>, Richard Hatchett <richard.hatchett@cepi.net>, David Marcozzi <(b)(6)@som.umaryland.edu>, "matthew. hepburn" <matthew.j.hepburn.civ@mail.mil>, Duane Caneva <(b)(6)@hq.dhs.gov>, Robert Kadlec <Robert.Kadlec@hhs.gov>, (b)(6)@mgh.harvard.edu" <(b)(6)@mgh.harvard.edu>, Tom Bossert <(b)(6)@me.com>
Subject: Re: VA Projections using Cruise Ship Data

Interestingly Japanese health folks only did OP swabs x1. NP swabs are much more sensitive. OP for us about half as sensitive (or less). NP already misses 50% with a single swab. So would probably multiply Japanese swab + by 2-3 to get true infection rate.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation
Global Center for Health Security, and
Associate Professor of Medicine

Division of Infectious Diseases
University of Nebraska Medical Center
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From: Carter Mecher <(b)(6)@charter.net>
Sent: Friday, February 28, 2020 3:06:10 PM
To: Richard Hatchett <richard.hatchett@cepi.net>; Lawler, James V <(b)(6)@unmc.edu>; Marcozzi, David <(b)(6)@som.umaryland.edu>; Hepburn, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>; Caneva, Duane <(b)(6)@hq.dhs.gov>; Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Callahan, Michael V., M.D. <(b)(6)@mgh.harvard.edu>; Tom Bossert <(b)(6)@me.com>
Subject: VA Projections using Cruise Ship Data

Non-UNMC email

I wanted to bounce this around the smaller group of wolverines. I also pulled the numbers of deaths annually in veterans and estimated deaths for all 19 M veterans using age specific death rates for males. The interesting thing is that the numbers of projected deaths related to COVID are actually pretty small compared to what we normally see for veterans. The challenge will be the amount of acute care—especially ICU care. The only chance that VA has is that we can knock down the attack rate thru TLC. The demand for acute care is overwhelming. The system would collapse under that level of demand.

Estimates of the impact of COVID on VA

In FY2019, VA cared for 6,271,019 unique veterans and had 9,237,638 veteran enrollees.

The Diamond Princess cruise ship outbreak can provide invaluable insights into the potential impact to VA.

Below is a comparison of the US population, the adult population aboard the cruise ship, and the Veteran population.

AGE	US Population 2017	% Distribution	Cruise Ship Passengers & Crew	% Distribution	FY2019 Veterans Vet Pop	% Distribution
20-29 years	45,489,095	19%	347	9%	932,473	5%
30-39 years	43,204,209	18%	428	12%	1,989,045	10%
40-49 years	40,617,231	17%	334	9%	2,194,505	11%
50-59 years	43,409,050	18%	398	11%	3,169,787	17%
60-69 years	36,824,083	15%	923	25%	3,735,399	19%
70-79 years	21,588,326	9%	1,015	27%	4,405,551	23%
>80 years	12,433,972	5%	227	6%	2,782,943	14%
Total population	243,565,966	100%	3,672	100%	19,209,704	100%

The Veteran population is similar to the Diamond Princess cruise ship population. If anything, the veteran population is even older (so at even higher risk). There were 3,711 passengers and crew aboard the crew ship (1,045 crew and 2,666 passengers). As of February 28, 2020, there have been 751

confirmed cases of COVID (attack rate of 20%). There have been 6 deaths thus far (lower limit of a case fatality rate of 0.80%). [A timeline of the outbreak is provided at the bottom of this message.] 380 of the confirmed cases were asymptomatic (50.6%). It is estimated that approximately 12-15% of the 751 passengers and crew with confirmed disease required acute care with 36 hospitalized patients reported to be in serious condition (5%). We looked at a range of ICU admissions (2%-5% of those who become infected).

Given the similarities of the demographics of the cruise ship and veterans, we could project the potential impact on veterans.

Veterans	Population FY2019	Total Infected (20% AR)	Number Asymptomatic (50.6%)	Hospitalizations 12%	ICU Admissions 2%	ICU Admissions 5%	Deaths CFR 0.80%
All Veterans	19,209,704	3,841,941	1,944,022	461,033	76,839	192,097	30,736
Veteran Enrollees	9,237,638	1,847,528	934,849	221,703	36,951	92,376	14,780
Veteran Uniques	6,271,019	1,254,204	634,627	150,504	25,084	62,710	10,034

Need to place these numbers into perspective.

Acute Inpatient Care	VHA Total
Operating Beds Hospital	15,744
Operating Beds Medicine/Surgery	9,817
Operating Beds ICU	1,692
ADC Hospital	9,805
ADC Medicine/Surgery	6,225
ADC ICU	1,101
ADC On a Ventilator	240
Daily Hospital Admissions	1,641
Daily Admissions Medicine/Surgery	1,226
Daily Admissions/Transfers in ICU	389
Emergency Department Care	
Daily ER Visits	6,874
Outpatient Care (non-ER)	
Daily Clinic Visits	209,336

The estimated number of deaths for all 19 M veterans is ~556,000. The number of annual deaths of veteran enrollees in FY2019 was 350,737. The projected number of COVID deaths for veterans is 14,780

The number of veterans who had an acute care hospitalization in FY2019 and died at any time during FY2019 was 62,375. The number of COVID deaths projected in veteran uniques (users) is 10,034.

Annually, VA has:

- 600,000 acute (medical/surgical) admissions
- 140,000 ICU admissions
- 2.5M ER/Urgent Care visits

If we assume that this outbreak will last approximately 3 months, we can then overlay the projected demand upon the usual background utilization over 3 months.

Even if we simply focus on the veteran uniques (veterans who used VA services and not enrollees), the numbers are a little overwhelming. We assumed that there might be 3 ER visits for each admission--so roughly 450,000 ER visits, 150,000 hospitalizations, and 25,000-63,000 ICU admissions.

Over an average 3-month period, VA would have ~625,000 ER/Urgent care visits, 150,000 acute care admissions, and 35,000 ICU admissions.

We assumed that acutely ill COVID patients will have long lengths of stay (14-21 days). If VA needs to absorb 150,000 hospitalizations (each with a LOS of 14-21 days), it would require 2.1 M to 3.2 M BDOCs.

If we assumed 14 day LOS for each ICU admission, 25,000-63,000 ICU admissions would equate to 350,000-882,000 ICU BDOCs.

The VA has 15,744 hospital operational beds (runs an ADC of only 9,805). Even if VA mobilized all those potential beds (15,744), for 3 months (90 days), we would generate the capacity for 1.4 M BDOCs.

Demand for care would exceed capacity by 700K BDOCs for a 14 day LOS and 1.7M BDOCs for a LOS of 21 days (1.5-2.2 times maximum capacity).

The VA has 1,692 ICU beds (runs an ADC of 1,101). Mobilizing all 1,692 ICU beds for 3 months (90 days), we would generate 152,000 BDOCs. Demand for ICU care would exceed capacity by 200,000-730,000 ICU BDOCs (2-5 times existing capacity).

This demand for care would not be constant across the 3 month period. The demand would rise exponentially, plateau, and then fall. The real concern is what will happen during the peak period of the epidemic.

VA does not have enough capacity to meet this demand, even if it mobilized every potential hospital bed to care for COVID patients (and there would be no capacity to care for usual demand for non-COVID acute care). And all this will be happening with a VA workforce that will be significantly diminished due to illness, home isolation, home quarantine and childminding responsibilities related to closure of schools and daycare, and fear.

Timeline of Diamond Princess cruise ship outbreak

Date	Event	Cumulative Number of Confirmed Cases	Cumulative Number of Deaths	Note
20-Jan	Cruise ship departs from Yokohama Japan			
25-Jan	80 year old passenger disembarks in Hong Kong			
1-Feb	80 year old passenger confirmed to have COVID-19			

	When results known, certificate of landing canceled and ship under quarantine. Tests for the virus would be administered to three groups: those with symptoms, those who got off in Hong Kong, and those who had close contact with the infected passenger.			
3-Feb	Ship arrives in port of Yokohama Japan			
5-Feb	10 passengers and crew confirmed +	10		
6-Feb	31 more passengers and crew confirmed +	41		
7-Feb	30 more passenger and crew confirmed +	61		
8-Feb	9 more passenger and crew confirmed +	70		
10-Feb	66 more passenger and crew confirmed +	136		439 tes
11-Feb	39 more passenger and crew confirmed +	175		492 tes
12-Feb	28 more passenger and crew confirmed +	203		4 in IC
13-Feb	15 more passenger and crew confirmed +	218		713 tes
14-Feb	67 more passenger and crew confirmed +	285		927 tes
15-Feb	70 more passenger and crew confirmed +	355		1,211 tested; asymptomatic
16-Feb	329 American evacuated from cruise ship (14 of the evacuees found to be +) 61 Americans remained on board 44 Americans remained hospitalized in Japan	369		
17-Feb	85 more passenger and crew confirmed +	454		1,721 tested; serious
18-Feb	167 more passenger and crew confirmed +	621		3,011 te
19-Feb	2 deaths	621	2	
20-Feb	13 more passenger and crew confirmed +	634	2	3,061 tested; seriously ill asymptomatic
23-Feb	Death reported in Japan		3	
24-Feb	Japan updates total to 691; US reports 36 in US	691	3	
25-Feb	Death reported in Japan; US reports 40 in US; UK 4; Australia 7; Hong Kong 4; Israel 2; Total 744; plus 4 not on ship	734	4	3,891 tested; seriously ill asymptomatic

26-Feb	US reports total of 42 cases in US; Japan announces that 45 of 813 former passengers have symptoms and will need to be tested; 14 new cases confirmed in the Diamond Princess cruise ship, raising the total to 705 cases inside the ship	750	4	
27-Feb	Australia (+1) 8 cases (repatriated)	751	4	
28-Feb	2 death reported in Japan	751	6	

As a check on deaths, I applied the age specific death rates per 100,000 population for the entire veteran population of 19M (90% male)

AGE	2019 VetPop	2017 Male All Cause Mortality per 100,000	Estimated 2017 All Cause Deaths
20 to 24 years	262,415	137.9	362
25 to 29 years	670,058	171.3	1,148
30 to 34 years	933,598	196.3	1,833
35 to 39 years	1,055,447	227.1	2,397
40 to 44 years	1,004,755	273.6	2,749
45 to 49 years	1,189,750	387.3	4,608
50 to 54 years	1,457,440	604.4	8,809
55 to 59 years	1,712,347	919.5	15,745
60 to 64 years	1,867,136	1,328.3	24,801
65 to 69 years	1,868,263	1,831.8	34,223
70 to 74 years	2,703,684	2,668.0	72,134
75 to 79 years	1,701,867	4,193.7	71,371
80 to 84 years	1,187,331	6,901.6	81,945
85 years and over	1,595,611	14,689.2	234,383
Total population	19,209,704	863.8	556,507

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Sent Date:	2020/03/02 05:39:26
Delivered Date:	2020/03/02 05:39:41

From:	Caitlin Owens <caitlin@axios.com>
To:	Harrison, Brian (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d145efc9c35c4865aca6e9d47786b204-Harrison, B>
Subject:	Axios Vitals: Potential CDC lab contamination — Coronavirus affordability concerns — Medicare for All isn't well understood
Date:	2020/03/02 06:16:45
Priority:	Normal
Type:	Note

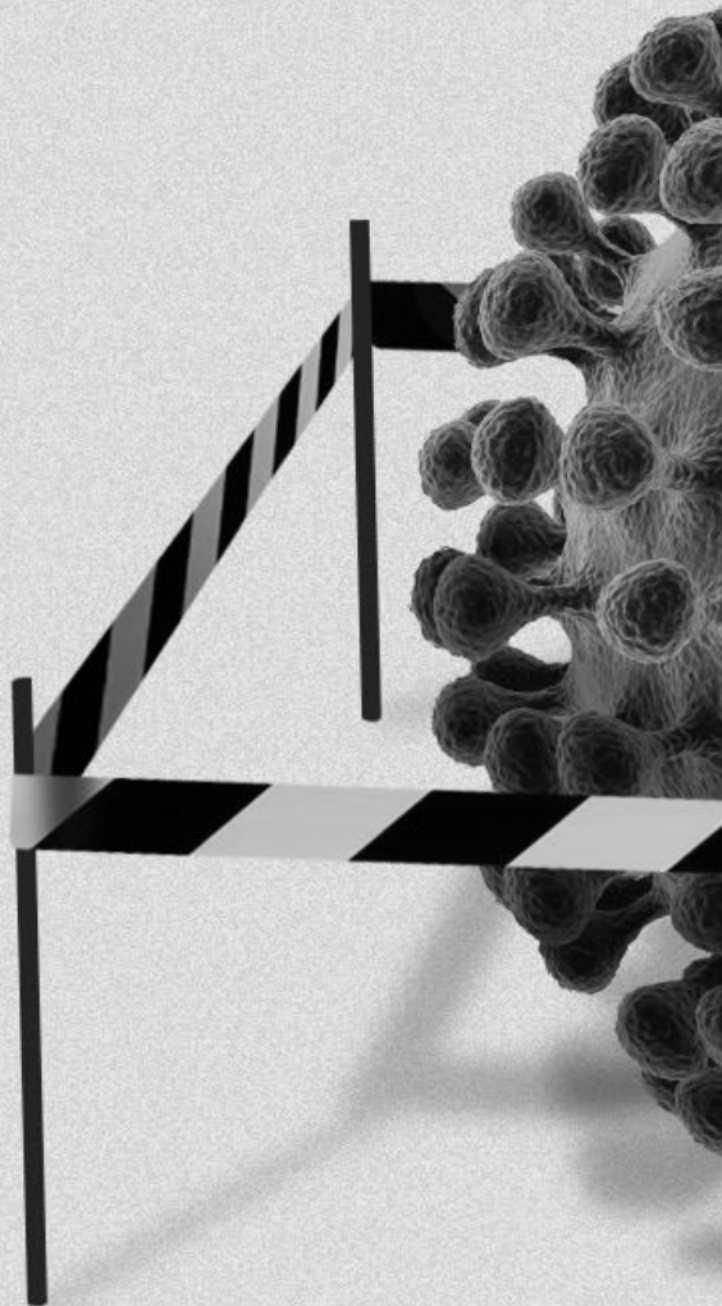


Good morning.

Situational awareness: A second American coronavirus death has been confirmed, again in

Today's word count is 816, or a 3-minute read.

1 big thing: Lab for coronavirus test kits may have been co



Sender:	Caitlin Owens <caitlin@axios.com>
Recipient:	Harrison, Brian (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d145efc9c35c4865aca6e9d47786b204-Harrison, B>
Sent Date:	2020/03/02 06:16:25
Delivered Date:	2020/03/02 06:16:45

From:	Mike Allen <mike@axios.com>
To:	Harrison, Brian (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d145efc9c35c4865aca6e9d47786b204-Harrison, B>
Subject:	Axios AM: Mike's Great 8 — Inside the Bernie economy — Pete's next move
Date:	2020/03/02 06:23:35
Priority:	Normal
Type:	Note



☐☐ **Good Monday morning.** The polls are open in Israel, where Prime Minister Benjamin Netanyahu is expected to announce his resignation.

• • ***Today's Smart Brevity™ count: 1,289 words ... 5 minutes.***

1 big thing: Inside the Bernie economy



Sender:	Mike Allen <mike@axios.com>
Recipient:	Harrison, Brian (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d145efc9c35c4865aca6e9d47786b204-Harrison, B>
Sent Date:	2020/03/02 06:23:27
Delivered Date:	2020/03/02 06:23:35

From:	ASPR Healthcare System Resilience Task Force (OS/ASPR/EMMO) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=4C1010B9282944D7A00AE70F23A4B6AE-ASPRHEALTHC>
To:	Collins, Francis (NIH/OD) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4bd4f570bdcb43f2800bf986fa40d75f-francis.col>; ASPR Healthcare System Resilience Task Force (OS/ASPR/EMMO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4c1010b9282944d7a00ae70f23a4b6ae-ASPRHealthc>
CC:	Kadlec, Robert (OS/ASPR/IO) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob>; Fauci, Anthony (NIH/NIAID) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=826965b24a314ffca7eddc6e8229aa7-anthony.fau>; Tabak, Lawrence (NIH/OD) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=197374c4f1864f8e97f24f1d96aeb765-lawrence.ta>; Marston, Hilary (NIH/NIAID) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=93be476c17024bbcb5b44add01fe6a8-hilary.mars>; Allen-Gifford, Patrice (NIH/OD) [E] </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=803ed4e77c17499e9ad51fc86b512f9a-patrice.all>
Subject:	RE: NIH participation in HCSRTF for COVID-19
Date:	2020/03/02 07:30:52
Priority:	Normal
Type:	Note

Thank you, Dr. Collins.

We look forward to NIH's participation on Wednesday.

Sincerely,
Scott Dafflitto, JD, MPH

From: Collins, Francis (NIH/OD) [E] (b)(6)@od.nih.gov>
Sent: Sunday, March 1, 2020 3:24 PM
To: ASPR Healthcare System Resilience Task Force (OS/ASPR/EMMO) <ASPR.HCSRTF@hhs.gov>
Cc: Kadlec, Robert (OS/ASPR/IO) <Robert.Kadlec@hhs.gov>; Fauci, Anthony (NIH/NIAID) [E] (b)(6)@niaid.nih.gov>; Tabak, Lawrence (NIH/OD) [E] (b)(6)@nih.gov>; Marston, Hilary (NIH/NIAID) [E] (b)(6)@nih.gov>; Allen-Gifford, Patrice (NIH/OD) [E] (b)(6)@nih.gov>
Subject: NIH participation in HCSRTF for COVID-19

Here is the NIH response to Bob Kadlec's request from 2/28.

Francis Collins

- Your Designee(s) name, title, and contact information
Hilary D. Marston, MD MPH
Medical Officer and Policy Advisor for Global Health
National Institute of Allergy and Infectious Diseases

Cell: (b)(6)
Email: (b)(6)@nih.gov

- OPDIV/STAFFDIV name National Institutes of Health/National Institute of Allergy and Infectious Diseases
- OPDIV/STAFFDIV current and future top five priorities related to COVID-19 (priority leads, descriptions, timelines)
 1. Development of vaccines to prevent COVID-19: Through intramural and extramural research programs, supporting a number of candidates through preclinical and clinical evaluation. The most advanced candidate is the NIAID Vaccine Research Center/Moderna mRNA candidate, which is targeted to enter a Phase 1 trial in mid March, with initial results in late Spring.
 2. Preclinical assessment of therapeutics to treat COVID-19: NIAID has worked with the ASPR Medical Countermeasure Task Force and WHO working groups to prioritize candidate therapeutics based on mechanism of action, evidence from related coronaviruses and early in vitro data. NIAID is setting up contract services to assess lead candidates in vitro and in vivo. In addition, NIAID is performing targeted screens of approved drugs, e.g., HIV and HCV protease inhibitors (in collaboration with NCATS).
 3. Clinical evaluation of therapeutics to treat COVID-19: NIAID, working under the auspices of its WHO Collaborating Centre, launched a double-blind randomized controlled trial comparing remdesivir to optimized standard of care. Remdesivir was prioritized for evaluation by both the ASPR MCM Task Force and the WHO. The trial launched February 21, 2020 and is active in two U.S. sites, with a plan to expand ~30 sites in the U.S. and up to 20 sites abroad. Since the trial is adaptive, it can be used to assess other therapeutics in the future.
 4. Development of small and large animal models for countermeasure development: Intramural and extramural researchers are collaborating to assess disease presentation in different potential models. To date, ACE2 mice and rhesus macaques demonstrate some recapitulation of human disease. Initial countermeasure experiments will start this week. Extramural has issued task orders to offer similar models to the countermeasure research and development community.
 5. Advancing diagnostics and other research via reagent sourcing: NIAID extramural programs is working with BARDA and CDC to support select diagnostic technology development. In addition, NIAID is sourcing viral strains, plasma/serum and peripheral blood mononuclear cells to make them available to the research community via our funded repositories. For example, genomic RNA is now provided to both diagnostic developers and major clinical laboratory companies for evaluation of molecular tests.
- OPDIV/STAFFDIV key activities and workgroups (current and under consideration) related to COVID-19 response (include activity/workgroup leads, key purpose, timelines)

Key activities outlined above under priorities. Below are a list of working groups in which we participate.

 - NSC Supply Chain Working Group – Hilary Marston lead. NIH role is to provide information on candidates in/entering clinical trials.
 - NIAID Coronavirus Research SWAT – Hilary Marston lead. Working group to facilitate interdivision collaboration and information sharing within NIAID. Reports into NIAID Preparedness and Response Working Group (Hilary Marston lead).
 - ASPR MCM Task Force – Hilary Marston lead, oversight group for interagency discussions on MCM development.
 - ASPR MCM Task Force Vaccine Working group – Cristina Cassetti lead, Erik Stemmy alternate
 - ASPR MCM Task Force Therapeutics Working Group – Ann Eakin lead

- ASPR MCM Task Force Diagnostics Working Group – Maureen Beanan lead
 - ASPR MCM Task Force Clinical Trials Working Group – John Beigel lead
 - ASPR Sample Sharing Working Group – Mukul Ranjan, Marciela DeGrace leads
 - Same individuals participate in multiple WHO working groups on the same topics.
- OPDIV/STAFFDIV key areas of concern or challenges identified to date
 1. Sourcing samples: sourcing viral isolates and particularly PBMCs (needed for vaccine and mAb development) has been difficult. If we did not have the CDC with U.S. patient isolates, we might not have virus to share because international sample sharing has been a major barrier. In addition, collecting PBMCs from recovering patients – linking to their providers, assessing their interest etc. has been difficult, and to date we only have cells from one patient.
 2. Countermeasure development timelines: Even with record breaking vaccine development timelines, candidates will not be “ready” for over a year at the earliest. With those timelines, scaling up manufacturing takes time and resources invested at risk. Often the companies with the greatest likelihood of manufacturing millions of doses are the ones with the slowest development timelines.
 3. Pragmatic expansion of RCTs: We would of course like the therapeutics RCT running in the locations that will see the most cases. However, this has been difficult to predict to date. With ASPR and CDC’s help, we were able to locate in two sites with repatriated cases from the Diamond Princess. Similar cooperative work would be important.
- OPDIV/STAFFDIV core competencies or other assets it can bring to COVID-19 response efforts
 1. Deep coronavirus expertise in intramural and extramural programs.
 2. Rapid countermeasure development via the NIAID Vaccine Research Center and other intramural expertise.
 3. Biocontainment labs for animal model work via intramural and extramural.
 4. Reagent repositories and preclinical services contract resources for academic and commercial developers.

Sender:	ASPR Healthcare System Resilience Task Force (OS/ASPR/EMMO) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=4C1010B9282944D7A00AE70F23A4B6AE-ASPRHEALTHC>
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CC:	Dareshori, Zack (HHS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a4e07b941ed04118ab39d2f6e3f2392c-Dareshori,>
Subject:	Fwd: URGENT: EUD (RPD) Package for Secretary's Signature March 2
Date:	2020/03/02 07:38:35
Priority:	Normal
Type:	Note

Brian- just making sure this is on your radar. I'll find time with you when documents are finalized. Thanks.

Sent from my iPhone

Begin forwarded message:

From: "Horska, Katerina (HHS/IOS)" <Katerina.Horska@hhs.gov>
Date: March 2, 2020 at 7:35:45 AM EST
To: "Stannard, Paula (HHS/IOS)" <Paula.Stannard@hhs.gov>, "Steele, Danielle (HHS/IOS)" <Danielle.Steele@hhs.gov>, "Bird, Catherine (OS/OGC)" <Catherine.Bird@hhs.gov>
Cc: "Agnew, Ann (HHS/IOS)" <Ann.Agnew@hhs.gov>, "Robinson, Wilma (HHS/IOS)" <Wilma.Robinson@hhs.gov>, "Hawkins, Jamar (HHS/OS)" <jamar.hawkins@hhs.gov>, "Malliou, Ekaterini (OS/IOS)" <Ekaterini.Malliou@hhs.gov>
Subject: Fwd: URGENT: EUD (RPD) Package for Secretary's Signature March 2

(b)(5)

Katerina

Begin forwarded message:

From: "Hrdina, Chad (OS/ASPR/SPPR)" <Chad.Hrdina@hhs.gov>
Date: March 1, 2020 at 11:38:55 PM EST
To: "Horska, Katerina (HHS/IOS)" <Katerina.Horska@hhs.gov>
Cc: "Ezernack, Paige (OS/ASPR/SPPR)" <Paige.Ezernack@hhs.gov>
Subject: FW: URGENT: EUD (RPD) Package for Secretary's Signature March 2

Katerina,

(b)(5)

Very Respectfully,

Chad

Chad M. Hrdina, MS, GC-WMD, EMT, notary public

Director, Division of Requirements

Office of the Assistant Secretary for Preparedness and Response

Office of Strategy, Policy, Planning, and Requirements

HEALTH AND HUMAN SERVICES | O'Neill House Office Building | 200 C Street SW | Washington, DC 20515

(202) 205-3510

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From: Ezernack, Paige (OS/ASPR/SPPR) <Paige.Ezernack@hhs.gov>

Sent: Sunday, March 1, 2020 8:29 PM

To: ASPR Exec Sec (OS/ASPR) <ASPRExecSec@hhs.gov>; ASPR-SPPR-ExecSec (OS/ASPR) <ASPR-SPPR-ExecSec@hhs.gov>; Bratcher-Bowman, Nikki (OS/ASPR/IO) <nikki.bratcherbowman@hhs.gov>; Shuy, Bryan (OS/ASPR/IO) <Bryan.Shuy@hhs.gov>

Cc: Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Hrdina, Chad (OS/ASPR/SPPR) <Chad.Hrdina@hhs.gov>

Subject: URGENT: EUD (RPD) Package for Secretary's Signature March 2

Importance: High

Good evening:

(b)(5)

Please let me know if you have any questions.

Thank you!

Paige

L. Paige Ezernack

Senior Policy Analyst

Office of the Assistant Secretary for Preparedness and Response

Office of Strategy, Policy, Planning and Requirements

HEALTH AND HUMAN SERVICES (DHHS) | O'Neill House Office Building | 200 C Street SW | Washington, DC 20515
o: (202) 260-0365 m: (b)(6)
paige.ezernack@hhs.gov | www.phe.gov

Sender:	Bird, Catherine (OS/OGC) </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=BB9D9180497C49C4A06A0DD1F6043DC7-BIRD, CATHE>
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Sent Date:	2020/03/02 07:38:33
Delivered Date:	2020/03/02 07:38:35
Message Flags:	Unread

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To:	Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.inistrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=bda3a527cbc247e7b2b52b192f68b92d-Tick-Borne>; (b)(6)@jhmi.edu>
CC:	(b)(6)@aol.com>; <jgs@jacquessimon.com>; <liawl@mmc.org>; (b)(6)@hotmail.com>; <hanp@mmc.org>; <gskall@wcsr.com>; <sgreen@hardball-law.com>; (b)(6)@ucdavis.edu>; (b)(6)@ucsd.edu>; (b)(6)@mc.duke.edu>; <lda@lymediseaseassociation.org>; (b)(6)@gmu.edu>; <c.perronne@aphp.fr>; (b)(6)@comcast.net>; Redfield, Robert R. (CDC/OD) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9ab74a26317547b8a754285d9eaa847c-robert.redf>; (b)(6)@umd.edu>; <allen.l.richards.civ@mail.mil>; <chris.smith@mail.house.gov>; (b)(6)@tulane.edu>; (b)(6)@stanford.edu>; <collin.peterson@mail.house.gov>; Jones, Estella (FDA/OC) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1a7a0c59d9084447aca534bb8f0447b0-estella.jon>; (b)(6)@aol.com>; (b)(6)@childrens.harvard.edu>; (b)(6)@comcast.net>; (b)(6)@gmail.com>; (b)(6)@jhmi.edu>; (b)(6)@tulane.edu>; (b)(6)@jhmi.edu>; Beard, Charles (Ben) (CDC/DDID/NCEZID/DVBD) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b0d99c3e702946cebbba5443dc1ae53e4-Beard, Char>; <rsabatino@lymesocietyinc.org>; (b)(6)@gmail.com>; (b)(6)@cshl.edu>; (b)(6)@cshl.edu>; <andrew.dillon@nice.org.uk>; <nice@nice.org.uk>; <phil.fontanarosa@jamanetwork.org>; <howard.bauchner@jamanetwork.org>; <leah.colton@us.af.mil>; (b)(6)@usuhs.edu>; <vanessa.r.melanson.ctr@mail.mil>; (b)(6)@gmail.com>; Weahkee, Michael (IHS/HQ) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=e3cef0a48d0842dfb636569257ca0e92-michael.wea>; <bryant.webber@us.af.mil>; Trent-Adams, Sylvia (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=650dc3276414421693345147bfafd132-Trent-Adams>; <Las@silverleafconsulting.net>; Berger, James J. (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=dcaf2b2f7b1a479d82a2d970d3bef40e-Berger, Jam>; (b)(6)@utmb.edu>; Bunnell, Rebecca (CDC/DDPHSS/OS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5c3aaf4e4c26495e978a2c467d6d4930-Bunnell, Re>; <beto.perezdeleon@ars.usda.gov>; <chien-chung.c.chao.civ@mail.mil>; Jilani, Shahla (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5e32c6a924444e6185ede0bb2e8712df-Jilani, Sha>; Visser, Susanna (CDC/DDID/NCEZID/DVBD) </o=ExchangeLabs/ou=Exchange Administrative Group

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Subject:	Re: An open letter to CDC attorney Heather Huntley
Date:	2020/03/02 08:07:56
Priority:	Normal
Type:	Note

To the Tick-Borne Disease Working Group:

To answer Dr. Lee's question, the CDC has implemented a Real-time polymerase chain reaction test kit for the coronavirus (DNA direct detection method). Nearly four decades into the Lyme disease epidemic we are still using antiquated serology because serology cannot be used to gauge treatment failure or success or identify persistent infection keeping the IDSA doctrine intact; "Lyme is hard to catch and easily treated." Direct detection methods for Lyme disease must be avoided at all costs.

Coronavirus Disease 2019 (COVID-19) Situation Summary

<https://www.cdc.gov/coronavirus/2019-ncov/summary.html>

Excerpt:

An important part of CDC's role during a public health emergency is to develop a test for the pathogen and equip state and local public health labs with testing capacity.

- After distribution of a **CDC rRT-PCR test** to diagnose COVID-19 to state and local public health labs started, performance issues were identified related to a problem in the manufacturing of one of the reagents. Laboratories were not able to verify the test performance.

- • CDC worked on two potential resolutions to this problem.
 - • CDC developed a new protocol that uses two of the three components of the original CDC test kit to detect the virus that causes COVID-19 after establishing that the third component, which was the problem with the original test, can be excluded from testing without affecting accuracy. CDC is working with FDA to amend the existing Emergency Use Authorization (EUA) for the test, but in the meantime, FDA granted discretionary authority for the use of the original test kits.
 - • Public health laboratories can use the original CDC test kit to test for the virus that causes COVID-19 using the new protocol.
 - • Further, newly manufactured kits have been provided to the International Reagent Resource[external icon](#) for distribution.
- • Combined with other reagents that CDC has procured, there are enough testing kits to test more than 75,000 people.
- • In addition, CDC has two laboratories conducting testing for the virus that causes COVID-19. CDC can test approximately 350 specimens per day.
- • Commercial labs are working to develop their own tests that hopefully will be available soon. This will allow a greater number of tests to happen close to where potential cases are.
- • CDC has grown the COVID-19 virus in cell culture, which is necessary for further studies, including for additional genetic characterization. The cell-grown virus was sent to NIH's BEI Resources Repository[external icon](#)[external icon](#) for use by the broad scientific community.

Carl Tuttle

Lyme Endemic Hudson, NH

On March 1, 2020 at 1:08 PM CARL TUTTLE <runagain@comcast.net>wrote:

To the Tick-Borne Disease Working Group:

Please see the correspondence below from Dr. Sin Lee of Milford Molecular Diagnostics.

----- Original Message -----

From: Sin Lee <shlee01@snet.net>
To: "hhh1@cdc.gov" <hhh1@cdc.gov>
Cc: CARL TUTTLE <(b)(6)@comcast.net>
Date: March 1, 2020 at 11:14 AM
Subject: An open letter to CDC attorney Heather Huntley

Dear Attorney Huntley:

I am the Plaintiff-Appellant in the United States Court of Appeals FOR THE FEDERAL CIRCUIT case No. 19-2060-JL.

But this letter does not concern the lawsuit. So I did not go through my lawyers involved in this case.

Per your previous advice, I am sending all letters addressed to the CDC through you.

So, please answer the question posed in the attached letter.

Thank you.

Sincerely,

Sin Hang Lee, MD

Carl Tuttle's response sent to Attorney Huntley:

----- Original Message -----

From: CARL TUTTLE <(b)(6)@comcast.net>

To: Sin Lee <shlee01@snet.net>, hhh1@cdc.gov

Date: March 1, 2020 at 11:27 AM

Subject: Re: An open letter to CDC attorney Heather Huntley

Thank you Dr. Lee!

To: Attorney Huntley,

Dr. Lee's letter will be posted to social media for the world to see as what has been deceitfully established by the CDC here in America is wreaking havoc globally. This antibiotic resistant/tolerant superbug has been well hidden from the public through avoidance of direct detection methods.

Direct detection methods have recently identified chronic Lyme disease in France:

PETITION UPDATE

Chronic Lyme disease in France

<https://www.change.org/p/the-us-senate-calling-for-a-congressional-investigation-of-the-cdc-idsa-and-aldf/u/25825323>

Sincerely,

Carl Tuttle

Lyme Endemic Hudson, NH

Dr. Lee's open letter to CDC attorney Heather Huntley:
(Attached)

Attorney Heather Huntley

Centers for Disease Control and Prevention

1600 Clifton Road NE M/S D-53

Atlanta, GA 30329

Open Letter via email: hhh1@cdc.gov

March 1, 2020

Re: Lyme Disease and COVID-19 infection

Dear Attorney Huntley:

I am the Plaintiff-Appellant in the United States Court of Appeals FOR THE FEDERAL CIRCUIT case No. 19-2060-JL. This case is against the Centers for Disease Control and Prevention (CDC) about breach of a contract to continue evaluation of polymerase chain reaction (PCR)/DNA sequencing against the two-tier serology test in the diagnosis of Lyme disease infections for better patient care.

You are the CDC lawyer who is blocking a public hearing in court through a series of legal maneuvers.

This letter requests that you on behalf of the CDC answer an extremely relevant question in view of the current COVID-19 outbreak:

Why is the CDC not using a two-tier serology test for the diagnosis of COVID-19 infection, as for Lyme disease infection?

I think both the Lyme disease patients and potential COVID-19 patients would like to know the answers.

Thank you in advance.

Sincerely,

Sin Hang Lee, MD

Sender:	CARL TUTTLE (b)(6)@comcast.net>
	Tick-Borne Disease Working Group (OS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=bda3a527cbc247e7b2b52b192f68b92d-Tick-Borne>; (b)(6)@jhmi.edu>; (b)(6)@aol.com>; <jgs@jacquessimon.com>; <liawl@mmc.org>; (b)(6)@hotmail.com>; <hanp@mmc.org>; <gskall@wcsr.com>; <sgreen@hardball-law.com>; (b)(6)@ucdavis.edu>; (b)(6)@ucsd.edu>; (b)(6)@mc.duke.edu>; <lda@lymediseaseassociation.org>; (b)(6)@gmu.edu>; <c.perronne@aphp.fr>; (b)(6)@comcast.net>;
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 <jennifer.peter@globe.com>;
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 (b)(6)@stonybrook.edu>;
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 <Shannon.Chandley@leg.state.nh.us>;
 <martha.fullerclark@leg.state.nh.us>;
 <James.Gray@leg.state.nh.us>;
 <Jeb.Bradley@leg.state.nh.us>;

	<Howard.Moffett@leg.state.nh.us>; <james.potter@nhms.org>; <michael.padmore@nhms.org>; <kathie@kathiefife.com>; <arankin@herald.ca>; Giroir, Brett (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a56fce4755704c4ca031d621b46fd6f7-Girori, Bre>; Azar, Alex (OS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=cd4875f6a7414810934ed443c7f34740-Azar, Alex>
Sent Date:	2020/03/02 08:06:36
Delivered Date:	2020/03/02 08:07:56
Message Flags:	Unread

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CC:	(b)(6)@aol.com>; <jgs@jacquessimon.com>; <liawl@mmc.org>; (b)(6)@hotmail.com>; <hanp@mmc.org>; <gskall@wcsr.com>; <sgreen@hardball-law.com>; (b)(6)@ucdavis.edu>; (b)(6)@ucsd.edu>; (b)(6)@mc.duke.edu>; <lda@lymediseaseassociation.org>; (b)(6)@gmu.edu>; <c.perronne@aphp.fr>; <kvf1@comcast.net>; Redfield, Robert R. (CDC/OD) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9ab74a26317547b8a754285d9eaa847c-robert.redf>; (b)(6)@umd.edu>; <allen.l.richards.civ@mail.mil>; <chris.smith@mail.house.gov>; (b)(6)@tulane.edu>; (b)(6)@stanford.edu>; <collin.peterson@mail.house.gov>; Jones, Estella (FDA/OC) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1a7a0c59d9084447aca534bb8f0447b0-estella.jon>; (b)(6)@aol.com>; (b)(6)@childrens.harvard.edu>; <sdonta@comcast.net>; (b)(6)@gmail.com>; (b)(6)@jhmi.edu>; (b)(6)@tulane.edu>; (b)(6)@jhmi.edu>; Beard, Charles (Ben) (CDC/DDID/NCEZID/DVBD) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b0d99c3e702946cebbba5443dc1ae53e4-Beard, Char>; <rsabatino@lymesocietyinc.org>; (b)(6)@gmail.com>; (b)(6)@cshl.edu>; (b)(6)@cshl.edu>; <andrew.dillon@nice.org.uk>; <nice@nice.org.uk>; <phil.fontanarosa@jamanetwork.org>; <howard.bauchner@jamanetwork.org>; <leah.colton@us.af.mil>; (b)(6)@usuhs.edu>; <vanessa.r.melanson.ctr@mail.mil>; (b)(6)@gmail.com>; Weahkee, Michael (IHS/HQ) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=e3cef0a48d0842dfb636569257ca0e92-michael.wea>; <bryant.webber@us.af.mil>; Trent-Adams, Sylvia (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=650dc3276414421693345147bfafd132-Trent-Adams>; <Las@silverleafconsulting.net>; Berger, James J. (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=dcdf2b2f7b1a479d82a2d970d3bef40e-Berger, Jam>; (b)(6)@utmb.edu>; Bunnell, Rebecca (CDC/DDPHSS/OS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5c3aaf4e4c26495e978a2c467d6d4930-Bunnell, Re>; <beto.perezdeleon@ars.usda.gov>; <chien-chung.c.chao.civ@mail.mil>; Jilani, Shahla (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5e32c6a924444e6185ede0bb2e8712df-Jilani, Sha>; Visser, Susanna (CDC/DDID/NCEZID/DVBD) </o=ExchangeLabs/ou=Exchange Administrative Group

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Carl Tuttle

Lyme Endemic Hudson, NH

On March 1, 2020 at 1:08 PM CARL TUTTLE <runagain@comcast.net>wrote:

To the Tick-Borne Disease Working Group:

Please see the correspondence below from Dr. Sin Lee of Milford Molecular Diagnostics.

----- Original Message -----

From: Sin Lee <shlee01@snet.net>

To: "hhh1@cdc.gov" <hhh1@cdc.gov>

Cc: CARL TUTTLE <(b)(6)@comcast.net>

Date: March 1, 2020 at 11:14 AM

Subject: An open letter to CDC attorney Heather Huntley

Dear Attorney Huntley:

I am the Plaintiff-Appellant in the United States Court of Appeals FOR THE FEDERAL CIRCUIT case No. 19-2060-JL.

But this letter does not concern the lawsuit. So I did not go through my lawyers involved in this case.

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Thank you.

Sincerely,

Sin Hang Lee, MD

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Attorney Heather Huntley

Centers for Disease Control and Prevention

1600 Clifton Road NE M/S D-53

Atlanta, GA 30329

Open Letter via email: hhh1@cdc.gov

March 1, 2020

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Sender:	CARL TUTTLE <(b)(6)@comcast.net>
	Tick-Borne Disease Working Group (OS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=bda3a527cbc247e7b2b52b192f68b92d-Tick-Borne>; (b)(6)@jhmi.edu>; (b)(6)@aol.com>; <jgs@jacquessimon.com>; <liawl@mmc.org>; (b)(6)@hotmail.com>; <hanp@mmc.org>; <gskall@wcsr.com>; <sgreen@hardball-law.com>; (b)(6)@ucdavis.edu>; (b)(6)@ucsd.edu>; (b)(6)@mc.duke.edu>; <lda@lymediseaseassociation.org>; (b)(6)@gmu.edu>; <c.perronne@aphp.fr>; (b)(6)@comcast.net>;
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 <James.Gray@leg.state.nh.us>;
 <Jeb.Bradley@leg.state.nh.us>;

	<Howard.Moffett@leg.state.nh.us>; <james.potter@nhms.org>; <michael.padmore@nhms.org>; <kathie@kathiefife.com>; <arankin@herald.ca>; Giroir, Brett (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a56fce4755704c4ca031d621b46fd6f7-Giroir, Bre>; Azar, Alex (OS/IOS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=cd4875f6a7414810934ed443c7f34740-Azar, Alex>
Sent Date:	2020/03/02 08:06:36
Delivered Date:	2020/03/02 08:08:39

From:	CARL TUTTLE <(b)(6)@comcast.net>
To:	Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.inistrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=bda3a527cbc247e7b2b52b192f68b92d-Tick-Borne>; (b)(6)@jhmi.edu> (b)(6)@aol.com>; <jgs@jacquessimon.com>; <liawl@mmc.org>; (b)(6)@hotmail.com>; <hanp@mmc.org>; <gskall@wcsr.com>; <sgreen@hardball-law.com>; (b)(6)@ucdavis.edu>; (b)(6)@ucsd.edu>; (b)(6)@mc.duke.edu>; <lda@lymediseaseassociation.org>; (b)(6)@gmu.edu>; <c.perronne@aphp.fr>; (b)(6)@comcast.net>; Redfield, Robert R. (CDC/OD) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9ab74a26317547b8a754285d9eaa847c-robert.redf>; (b)(6)@umd.edu>; <allen.l.richards.civ@mail.mil>; <chris.smith@mail.house.gov>; (b)(6)@tulane.edu>; (b)(6)@stanford.edu>; <collin.peterson@mail.house.gov>; Jones, Estella (FDA/OC) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1a7a0c59d9084447aca534bb8f0447b0-estella.jon>; (b)(6)@aol.com>; (b)(6)@childrens.harvard.edu>; (b)(6)@comcast.net>; (b)(6)@gmail.com>; (b)(6)@jhmi.edu>; (b)(6)@tulane.edu>; (b)(6)@jhmi.edu>;
CC:	Beard, Charles (Ben) (CDC/DDID/NCEZID/DVBD) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b0d99c3e702946cebb5443dc1ae53e4-Beard, Char>; <rsabatino@lymesocietyinc.org>; (b)(6)@gmail.com>; (b)(6)@cshl.edu>; (b)(6)@cshl.edu>; <andrew.dillon@nice.org.uk>; <nice@nice.org.uk>; <phil.fontanarosa@jamanetwork.org>; <howard.bauchner@jamanetwork.org>; <leah.colton@us.af.mil>; (b)(6)@usuhs.edu>; <vanessa.r.melanson.ctr@mail.mil>; (b)(6)@gmail.com>; Weahkee, Michael (IHS/HQ) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=e3cef0a48d0842dfb636569257ca0e92-michael.wea>; <bryant.webber@us.af.mil>; Trent-Adams, Sylvia (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=650dc3276414421693345147bfafd132-Trent-Adams>; <Las@silverleafconsulting.net>; Berger, James J. (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=dcdf2b2f7b1a479d82a2d970d3bef40e-Berger, Jam>; (b)(6)@utmb.edu>; Bunnell, Rebecca (CDC/DDPHSS/OS) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5c3aaf4e4c26495e978a2c467d6d4930-Bunnell, Re>; <beto.perezdeleon@ars.usda.gov>; <chien-chung.c.chao.civ@mail.mil>; Jilani, Shahla (HHS/OASH) </o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5e32c6a924444e6185ede0bb2e8712df-Jilani, Sha>; Visser, Susanna (CDC/DDID/NCEZID/DVBD) </o=ExchangeLabs/ou=Exchange Administrative Group

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Subject:	Re: An open letter to CDC attorney Heather Huntley
Date:	2020/03/02 08:07:12
Priority:	Normal
Type:	Note

To the Tick-Borne Disease Working Group:

To answer Dr. Lee's question, the CDC has implemented a Real-time polymerase chain reaction test kit for the coronavirus (DNA direct detection method). Nearly four decades into the Lyme disease epidemic we are still using antiquated serology because serology cannot be used to gauge treatment failure or success or identify persistent infection keeping the IDSA doctrine intact; "Lyme is hard to catch and easily treated." Direct detection methods for Lyme disease must be avoided at all costs.

Coronavirus Disease 2019 (COVID-19) Situation Summary

<https://www.cdc.gov/coronavirus/2019-ncov/summary.html>

Excerpt:

An important part of CDC's role during a public health emergency is to develop a test for the pathogen and equip state and local public health labs with testing capacity.

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To: Attorney Huntley,

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PETITION UPDATE

Chronic Lyme disease in France

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Attorney Heather Huntley

Centers for Disease Control and Prevention

1600 Clifton Road NE M/S D-53

Atlanta, GA 30329

Open Letter via email: hhh1@cdc.gov

March 1, 2020

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